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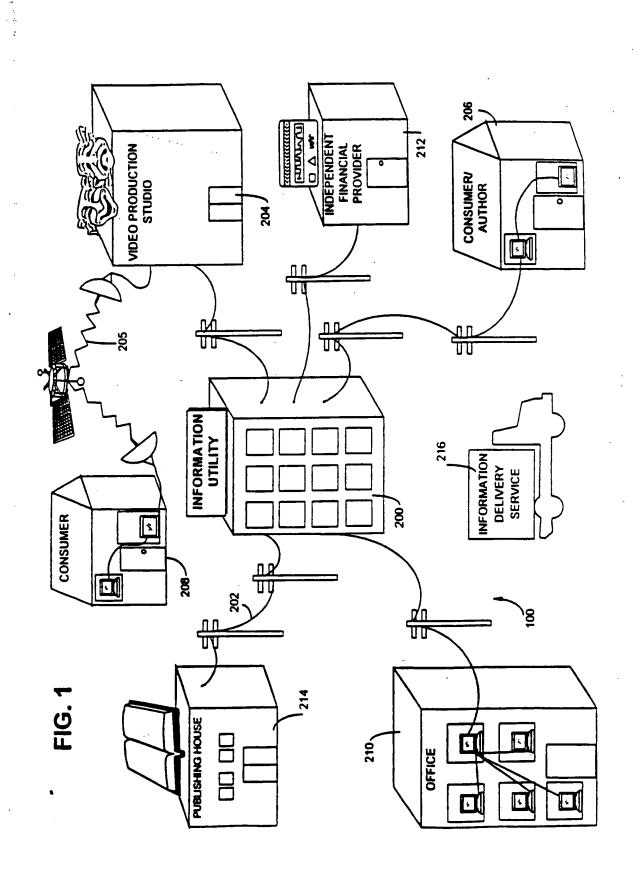
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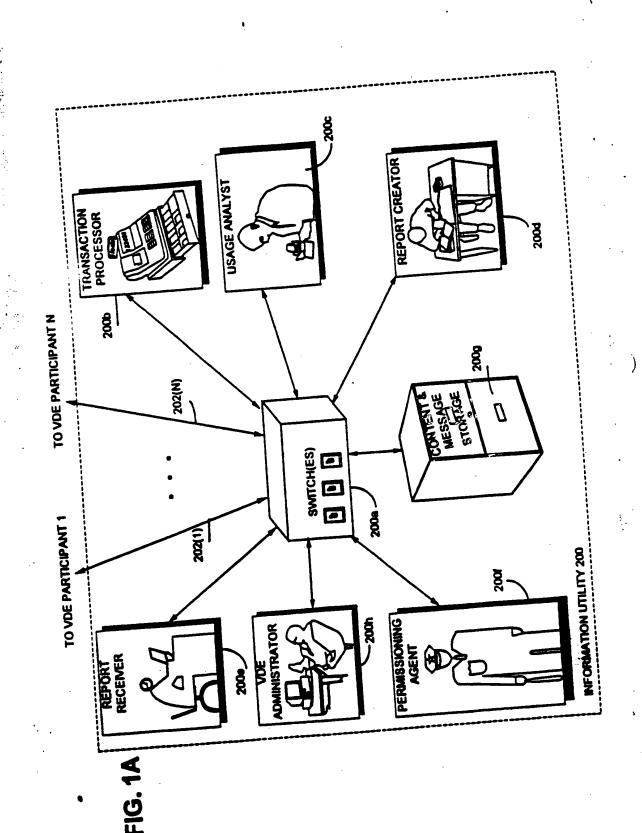
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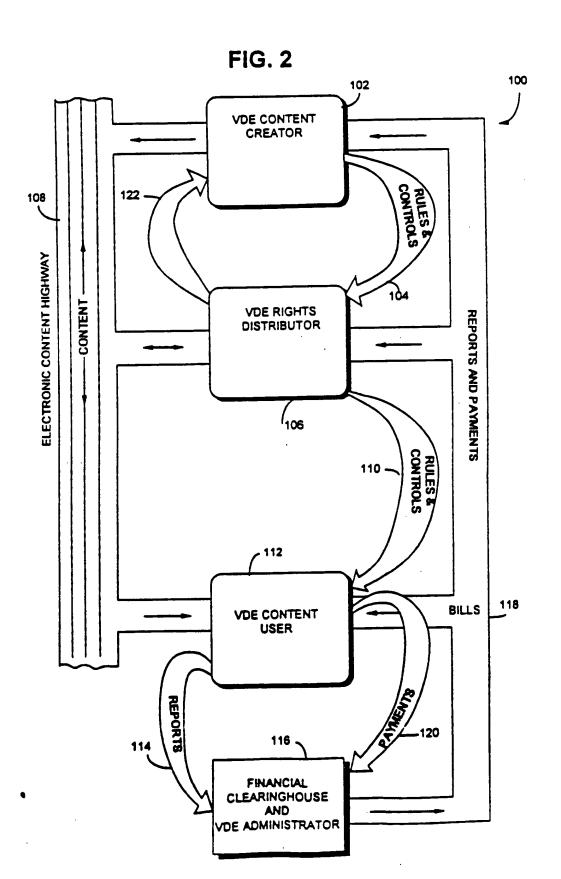
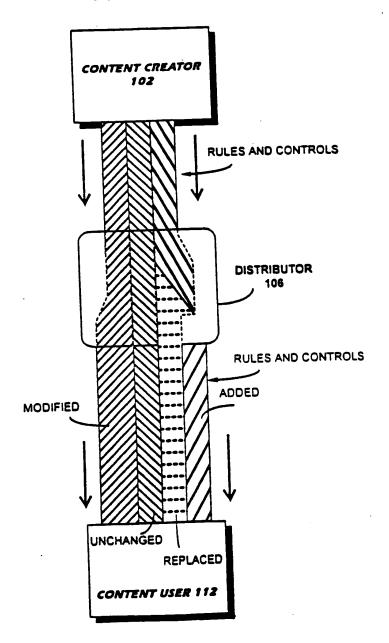
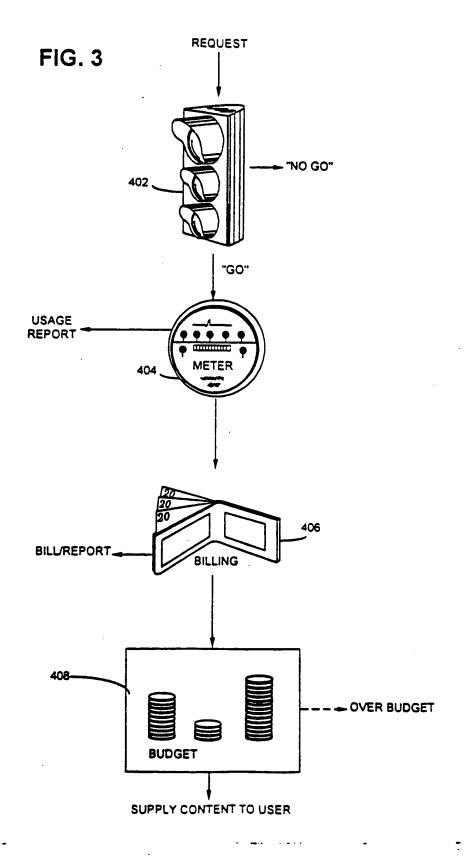
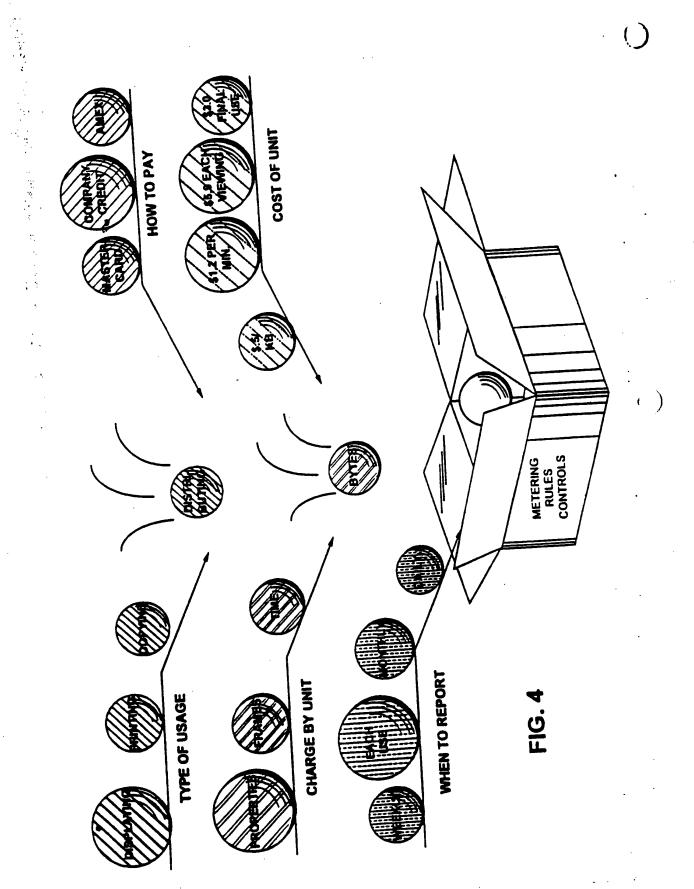
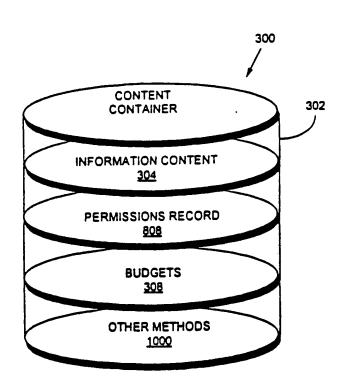


FIG. 2A









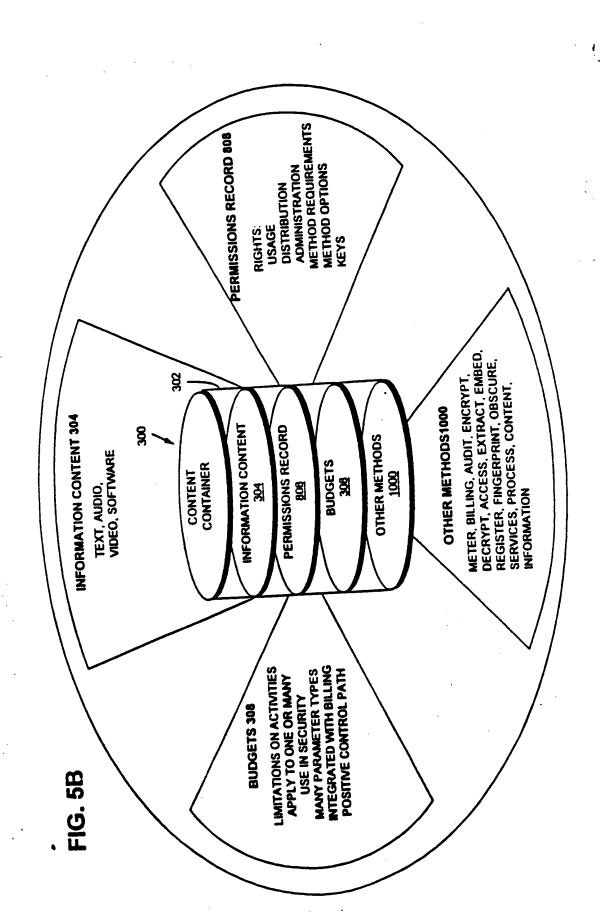
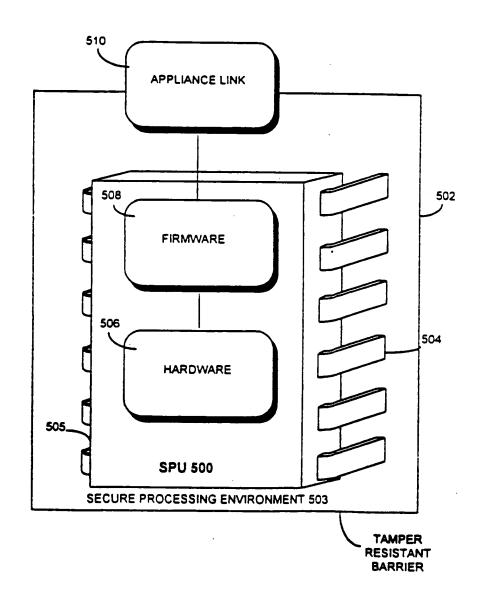
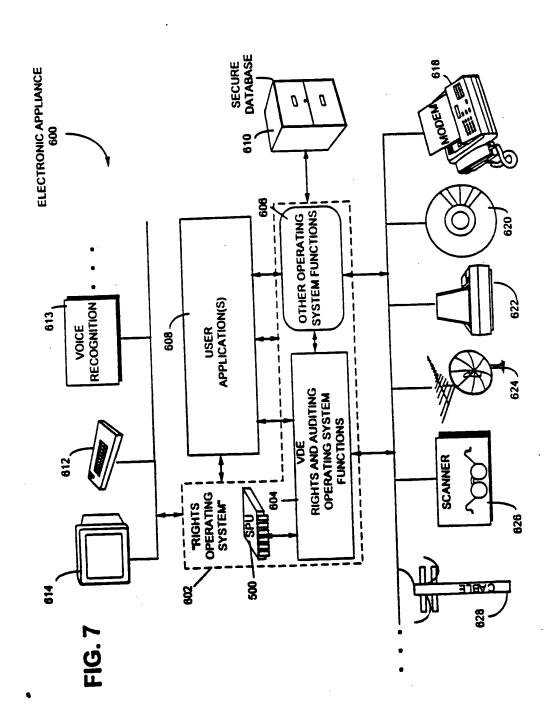
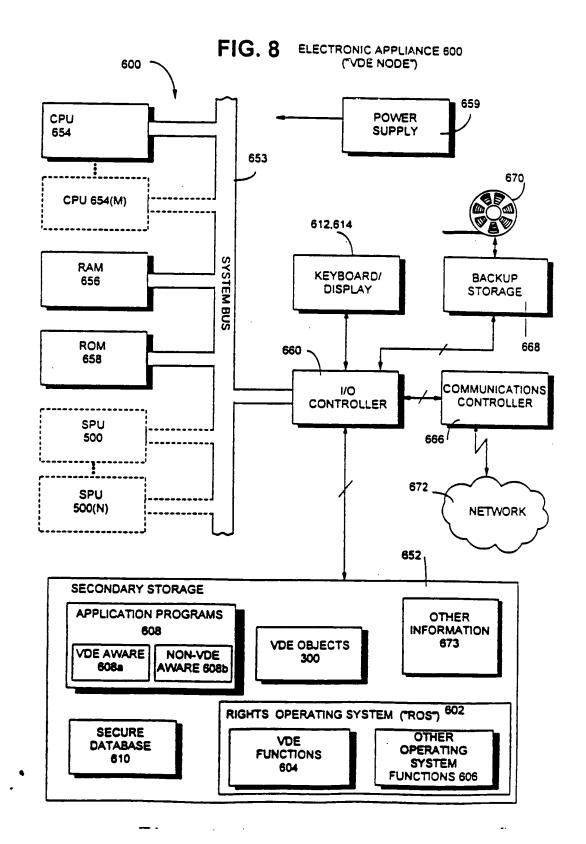
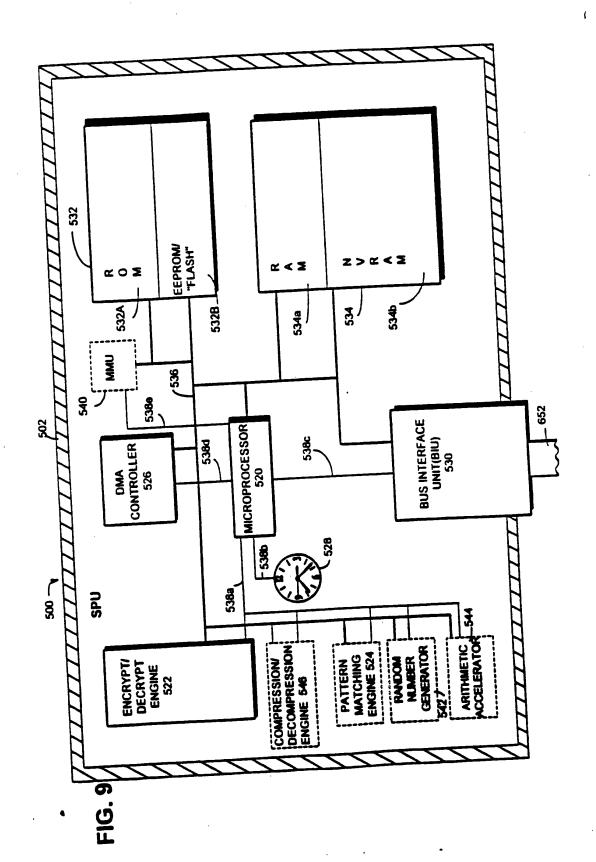


FIG. 6









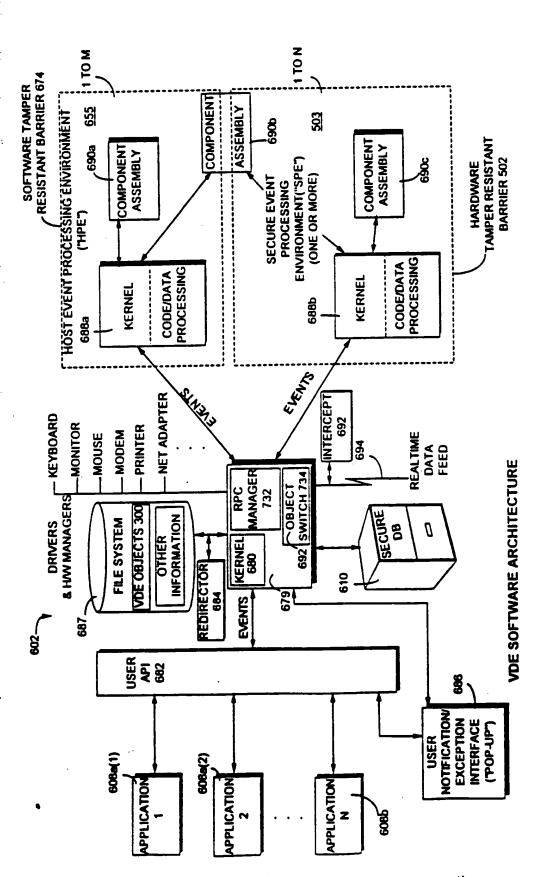
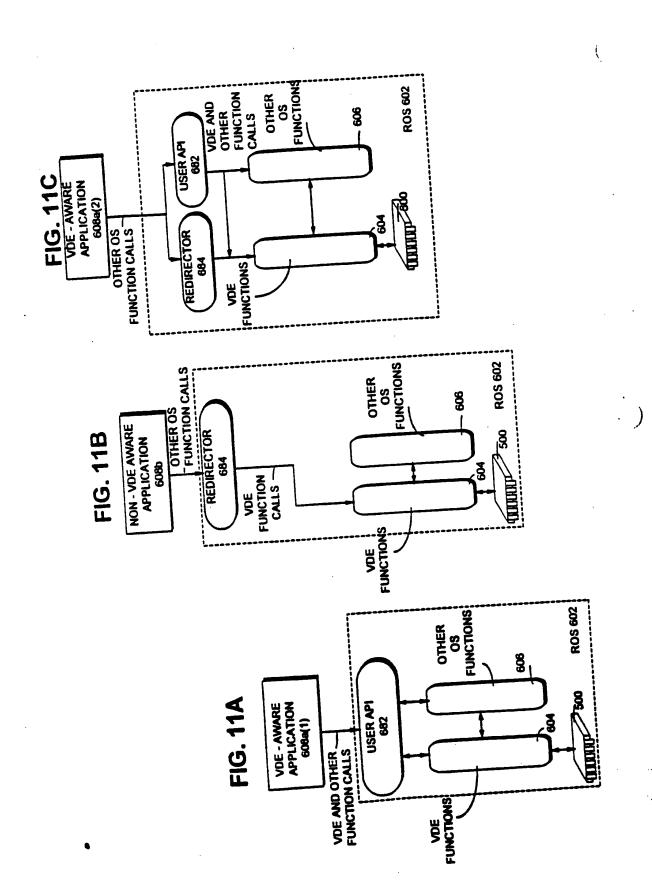
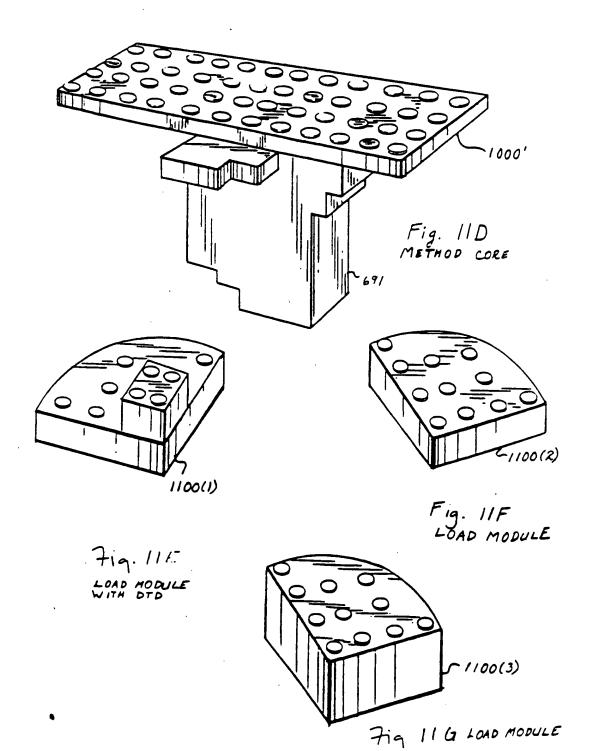
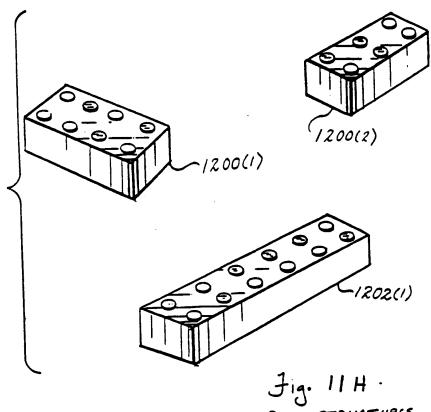


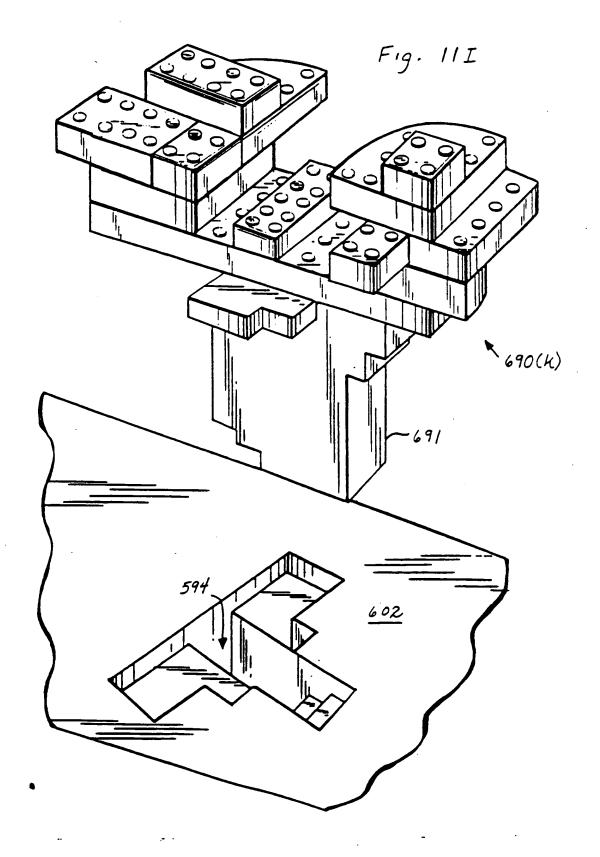
FIG. 10

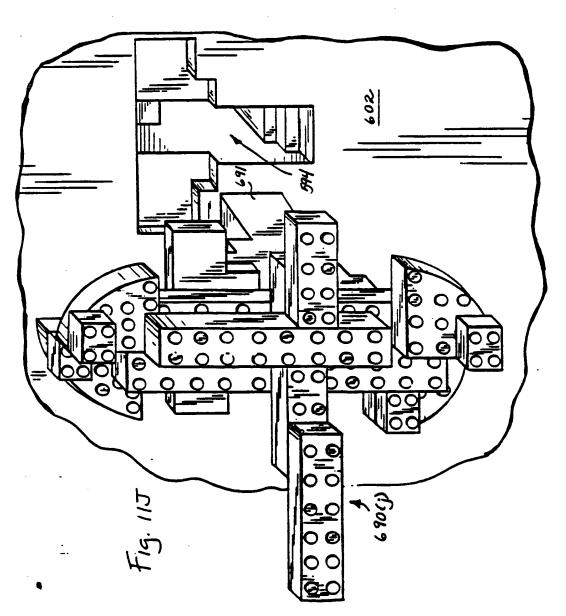


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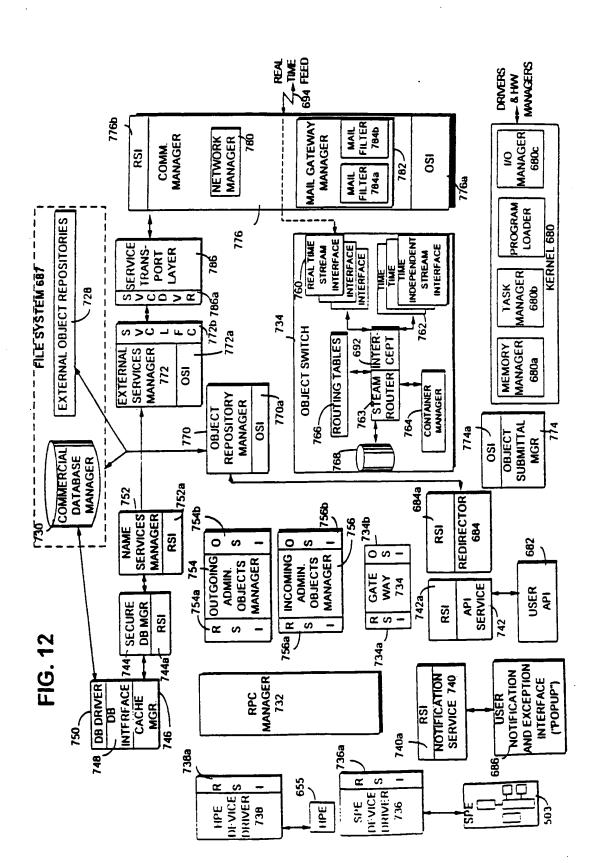




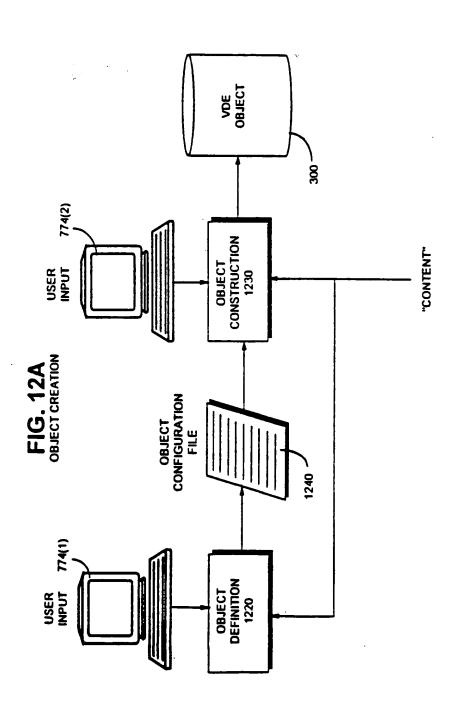


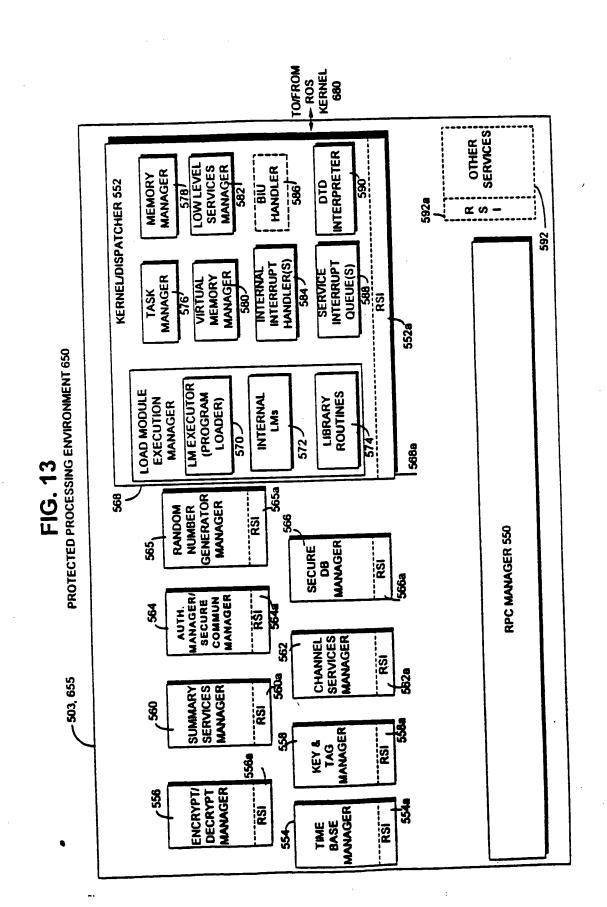
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DEVICE FIRM WIRE LOW LEVEL SERVICES 582
INITIALIZATION
POST
DOWNLOAD CHALLENGE/RESPONSE AND AUTHENTICATION
RECOVERY
EEPROM/FLASH MEMORY MANAGER
KERNEL/DISPATCHER 552
INITIALIZATION
TASK MANAGER 576 (SLEEP/AWAKE/CONTEXT SWAP)
INTERRUPT HANDLER 584 (TIMER/BIU/POWER FAILWATCHDOG TIMER/ENCRYPTION COMPLETED)
BIU HANDLER 586
MEMORY MANAGER 578
INITIALIZATION (SETTING MMU TABLES
ALLOCATE
DELLOCATE
VIRTUAL MEMORY MANAGER 580
SWAP BLOCK PAGING
EXTERNAL MODULE PAGING
MEMORY COMPRESS
RPC AND TABLES 550
INITIALIZATION
MESSAGING CODE /SERVICES MANAGER
SEND/RECEIVE
STATUS
RPC DISPATCH TABLE
RPC SERVICE TABLE

FIG. 14A

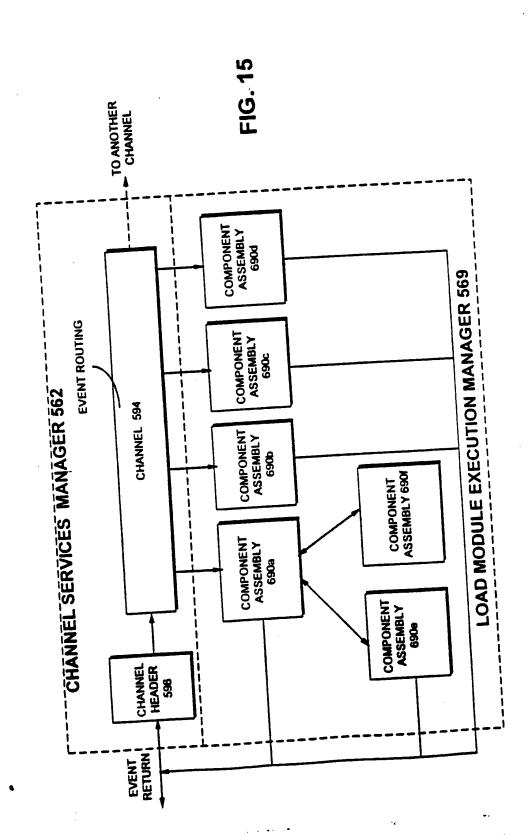
TIME BASE MANAGER 554	
ENCRYTION/DECRYPTION MANAGER 5	56
PK	
BULK	\Box
KEY AND TAG MANAGER 558	
KEY STORAGE IN EEPROM	
KEY LOCATOR	
KEY GENERATOR	
CONVOLUTION ALGORITHM	
SUMMARY SERVICES MANAGER 560	
EVENT SUMMARIES	
BUDGET SUMMARIES	
DISTRIBUTER SUMMARY SERVIC	ES
CHANNEL SERVICES MANAGER 562	コ
CHANNEL HEADERS	
CHANNEL DETAILS	
LOAD MODULE EXECUTION SERVICES	
568 AUTHENTICATION MANAGER/SECURE COMMUNICATION MANAGER 564	
DATABASE MANAGER 566	ᅱ
MANAGEMENT FILE SUPPORT	
TRANSACTION AND SEQUENCE NUMBER SUPPORT	
SRN/ HASH	
OTD INTERPRETER 590	
LIBRARY ROUTINES 674	_
I / O CALLS(STRING SEARCH ETC.)
MISC. ITEMS THAT ARE PROBABL LIBRARY ROUTINES	Ϋ́,
LIBRARY ROUTINES	_
INTERNAL LM'S 572 FOR BASIC	_
METHODS	
METER LOAD MODULE(S)	_
BILLING LOAD MODULE(S)	_
BUDGET LOAD MODULE(S)	_
AUDIT LOAD MODULE(S)	
READ OBJECT LOAD MODULE(S	
WRITE OBJECT LOAD MODULE	S)
OPEN OBJECT LOAD MODULE(S	S)
CLOSE OBJECT LOAD MODULE	(S)

FIG. 14B

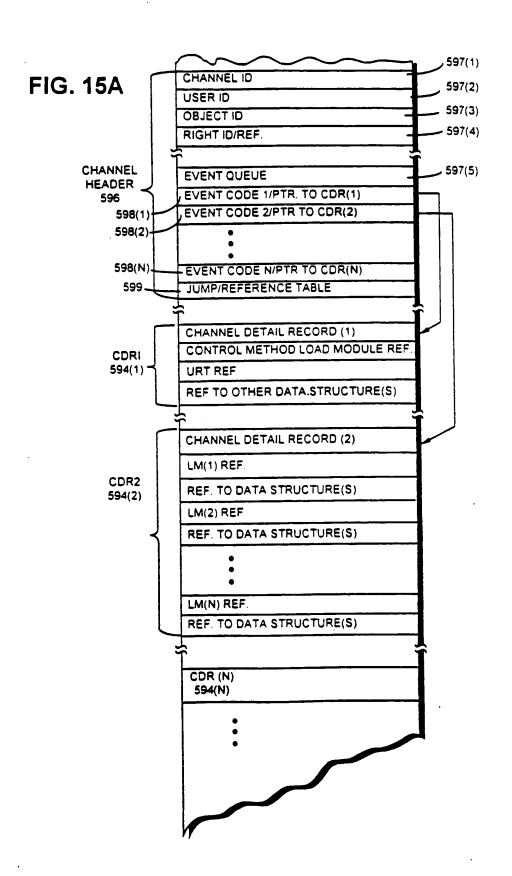
		7
<u></u>	PUBLIC KEY AND PRIVATE KEY, SYSTEM ID, AUTHENTICATION CERTIFICATE, VDE SYSTEM PUBLIC KEY, PRIVATE DES KEY	
-	TOP LEVEL KEYS FOR OBJECTS	
-	TOR LEVEL BUDGET INFO	
	METER SUMMATION VALUES KEY RECORDS FOR BUDGET RECORDS, AUDIT RECORDS, STATIC MANAGEMENT RECORDS, UPDATED MANAGEMENT RECORDS, ETC.	
	MANOGE	
	DEVICE DATA TABLE	l
	SITE ID	1
	TIME	1
l	ALARMS	1
\	TRANSACTION/SEQUENCE #S	4
1	MISCELLANEOUS	4
1	MEMORY MAP	4
1	MAP METERS	-{
1	LMUDT TABLE TASK MANAGER 576	-1
١	CHANNEL(S)	-
١	SUMMARY SERVICES 560	ヿ
1	SECURE DATABASE TAGS	\dashv
1	SECURE DATABAGE	\dashv
1	HASH ENTRIES	
1		
1	• • • • • • • • • • • • • • • • • • •	
	NON-VOLATILE MEMORY 534b	

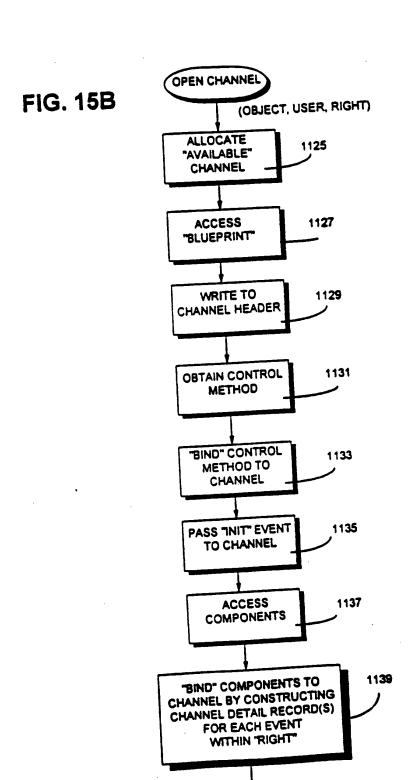
FIG. 14C

STACK	
•	
CHANNEL SWAP BLOCK	
	CHANNEL LM
	CHANNEL HEADER & D1
CONTROL SWAP BLOCK	
	CONTROL LM
	CONTROL D1
	COMMIT LM COMMIT D1, D2, D3
	COMMIT D1, D2, D3
EVENT SWAP BLOCK	
	EVENT LM
•	MAP TABLE (SINGLE) D1
METER SWAP BLOCK	_J
METER ONA BEOOK	METER LM
	METER UDE DELTA DELTA
	METER TRAIL LM
	METER TRAIL UDE
	DELTA,DELTA'
BUDGET SWAP BLOCK	METER LM
	METER UDE DELTA DELTA
	METER TRAIL LM
	METER TRAIL UDE
	DELTA, DELTA
BILLING SWAP BLOCK	
	BILLING LM
	METER UDE
	BUDGET UDE
,	BILLING TABLE UDE
	BILLING TRAIL LM
	BILLING TRAIL UDE DELTA
	•
	•



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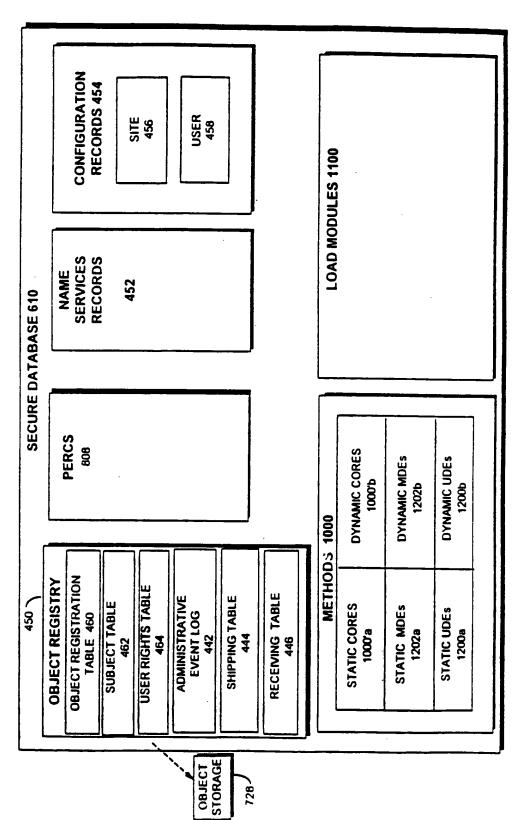


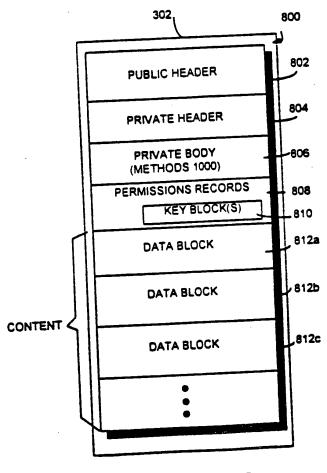
END

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* ** .

FIG. 16





LOGICAL OBJECT

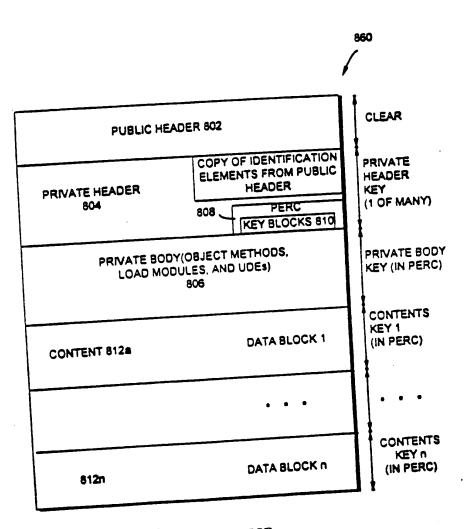
FIG. 17

850 PUBLIC HEADER 802 CLEAR COPY OF IDENTIFICATION ELEMENTS FROM PUBLIC PRIVATE PRIVATE HEADER HEADER HEADER 804 KEY (1 OF MANY) PRIVATE BODY(OBJECT LOCAL METHODS, LOAD MODULES, AND UDES) PRIVATE BODY 806 KEY (IN PERC) CONTENTS CONTENT 812a KEY 1 DATA BLOCK 1 (IN PERC) CONTENTS 812n KEY n DATA BLOCK n (IN PERC)

STATIONARY OBJECT

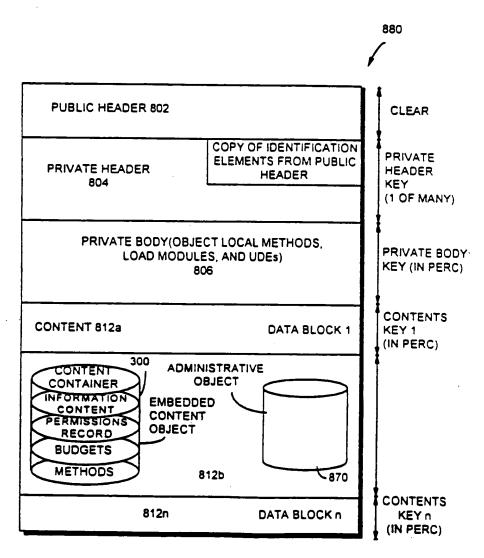
FIG. 18

1



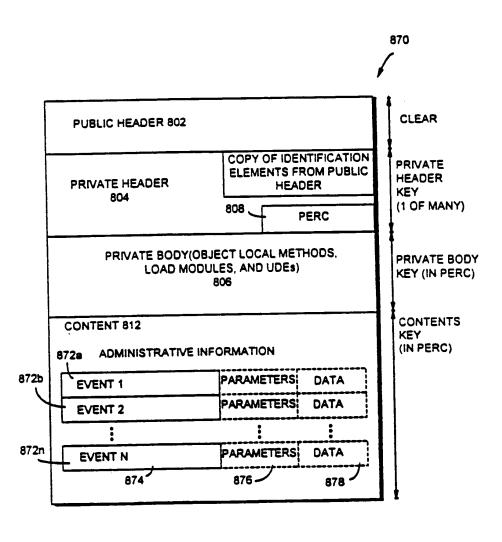
TRAVELING OBJECT

FIG. 19



CONTENT OBJECT

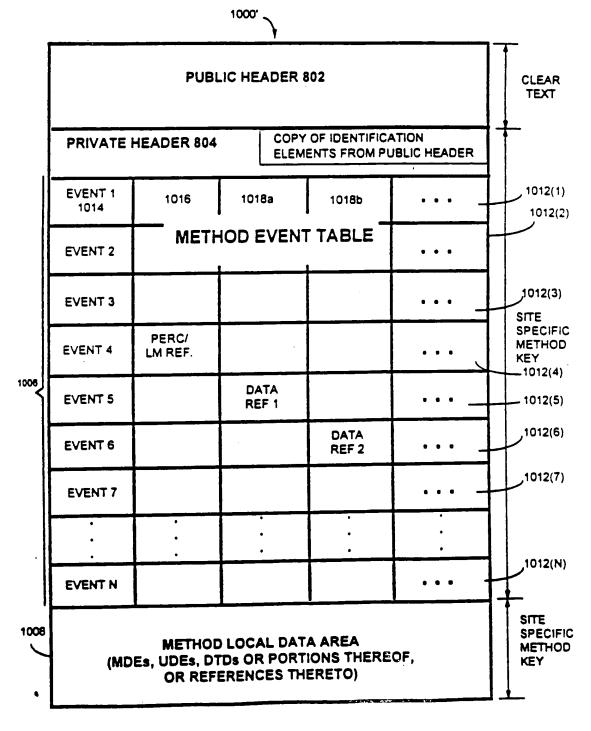
FIG. 20



()

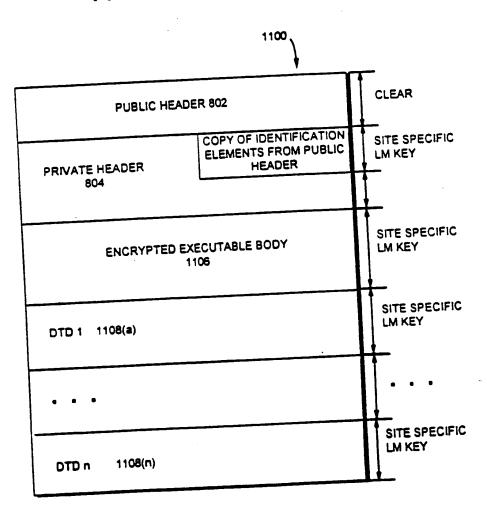
ADMINISTRATIVE OBJECT FIG. 21

FIG. 22



METHOD "CORE"

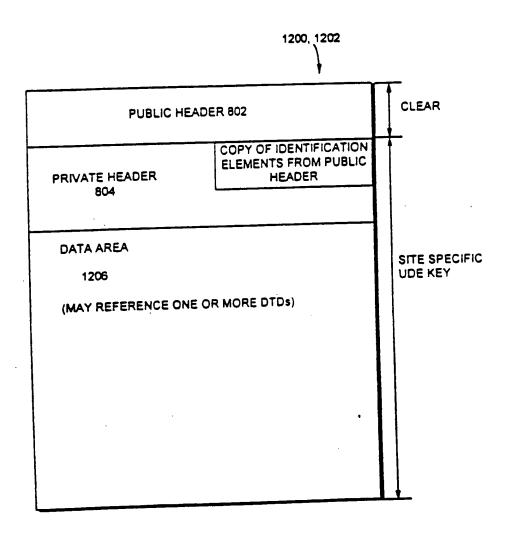
FIG. 23



)

LOAD MODULE

FIG. 24



UDE (MDE)

FIG. 25A

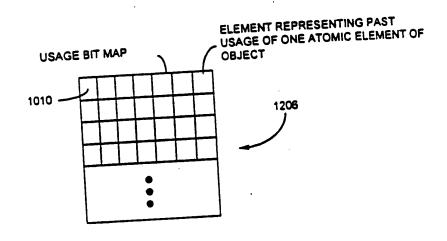


FIG. 25B

	TIME								
JAN. FEB. MAR. APRIL MAY JUNE									
1	1	0	2	0	1	0	0		
RECORDING NUMBER	2	0	0	5	10	3	0		
	3	0	3	2	1	0	V		
	4	0	0	0	1	0	y		
	5	0	0	1	0				
	₽6	0	0	0	سر	,			
	120	×-	1						

FIG. 25C

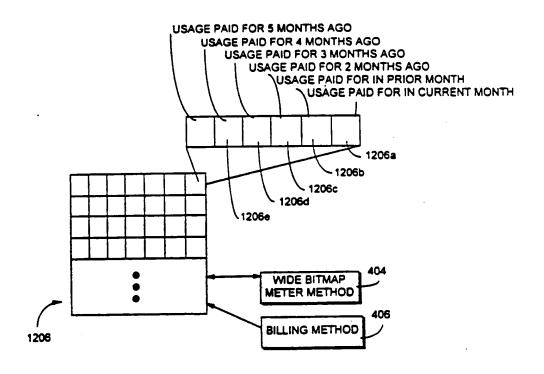
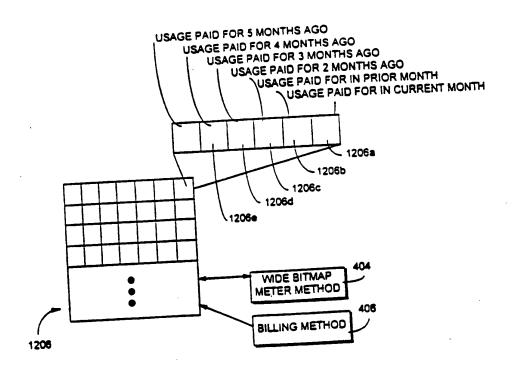


FIG. 25C



ì

FIG. 26

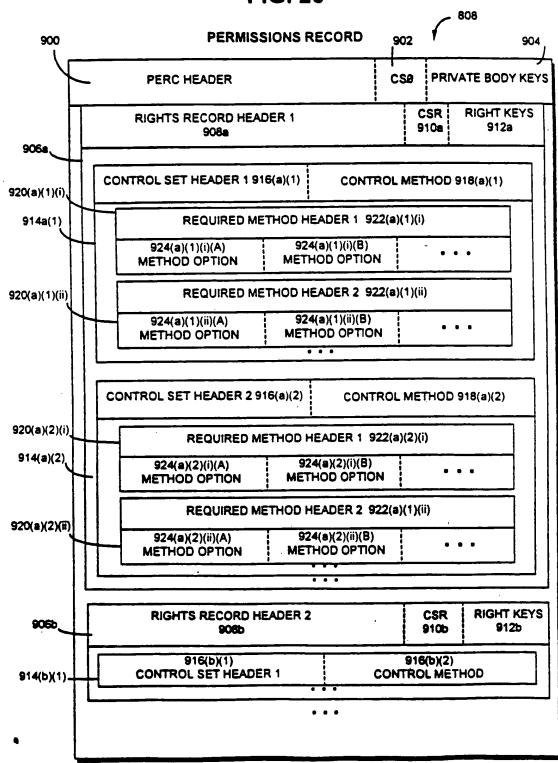
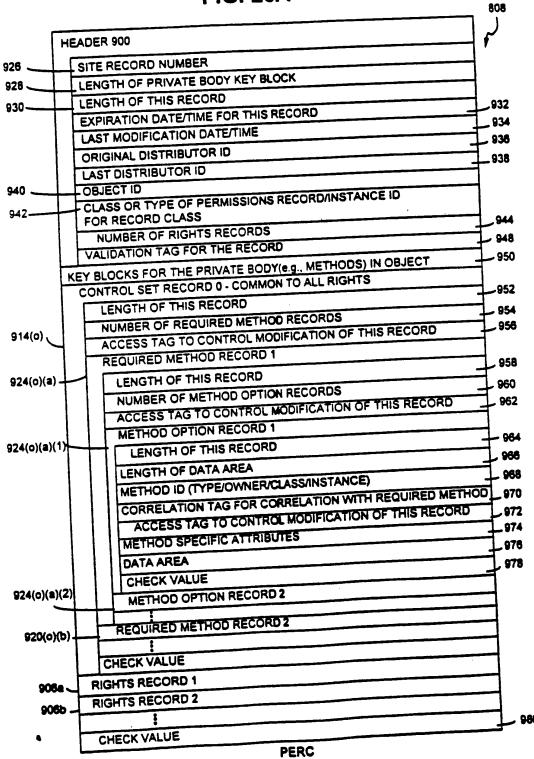
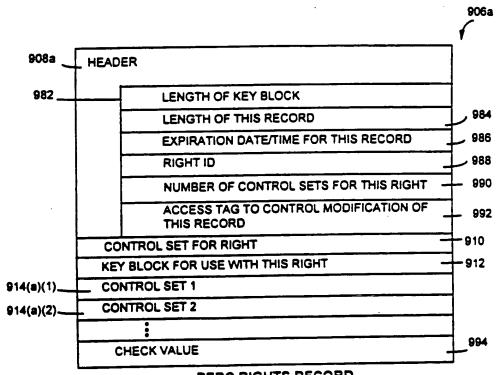


FIG. 26A



* 8.

FIG. 26B



PERC RIGHTS RECORD

. . .

FIG. 27

	SHIPPING TABLE 444A(1)	
	1	444
	SITE RECORD NUMBER	4440/2)
	USER (GROUP) ID	444A(2)
	REF. TO "FIRST" COMPLETED OUTGOING SHIPPING RECORD	_ 444A(3)
	REF. TO "LAST" COMPLETED OUTGOING SHIPPING RECORD	444A(4)
	BEE TO "FIRST" SCHEDULED OUTGOING SHIPPING RECORD	444A(5)
	REF. TO "LAST" SCHEDULED OUTGOING SHIPPING RECORD	444A(6) 444A(7)
	VALIDATION TAG FROM NAME SERVICES RECORD	
	VALIDATION TAG FOR "FIRST" OUTGOING SHIPPING RECORD(S)	444A(8)
	CHECK VALUE	444A(9)
_	<u> </u>	Ĵ
_	SITE RECORD NUMBER	445(1)(A)
SHIPPING RECORD 445(1)	FIRST DATE/TIME FOR SCHEDULED SHIPMENT	445(1)(B)
	LAST DATE/TIME FOR SCHEDULED SHIPMENT	445(1)(C)
	ACTUAL DATE/TIME OF COMPLETED SHIPMENT	445(1)(D)
	OBJECT ID OF ADMINISTRATIVE OBJECT (TO BE) SHIPPED	445(1)(E)
	REF. TO ENTRY IN ADMINISTRATIVE EVENT LOG	445(1)(F)
	REF. TO NAME SERVICES RECORD NAMING RECIPIENT	445(1)(G)
	PURPOSE OF SHIPMENT	445(1)(H)
	STATUS OF SHIPMENT	445(1)(1)
	REF. TO "PREVIOUS" OUTGOING SHIPPING RECORD	445(1)(J)
	REF. TO "NEXT" OUTGOING SHIPPING RECORD	445(1)(K)
	VALIDATION TAG FROM HEADER	445(1)(L)
	VALIDATION TAG TO ADMINISTRATIVE EVENT LOG	445(1)(M)
	VALIDATION TAG TO NAME SERVICES RECORD	445(1)(N)
	VALIDATION TAG FROM PREVIOUS RECORD	445(1)(0)
	VALIDATION TAG TO NEXT RECORD	445(1)(P)
	CHECK VALUE	445(1)(Q)
	•	
	SHIPPING RECORD N	445(1)(R)
•	SHIPPING RECORD !!	

FIG. 28
RECEIVING TABLE

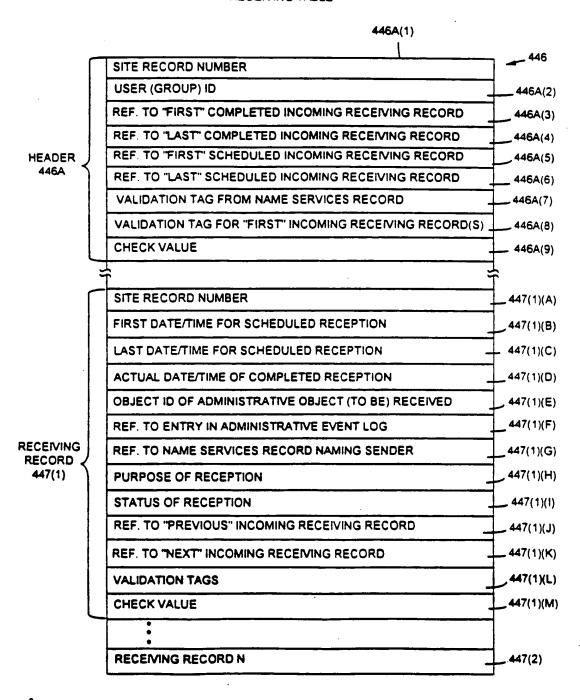
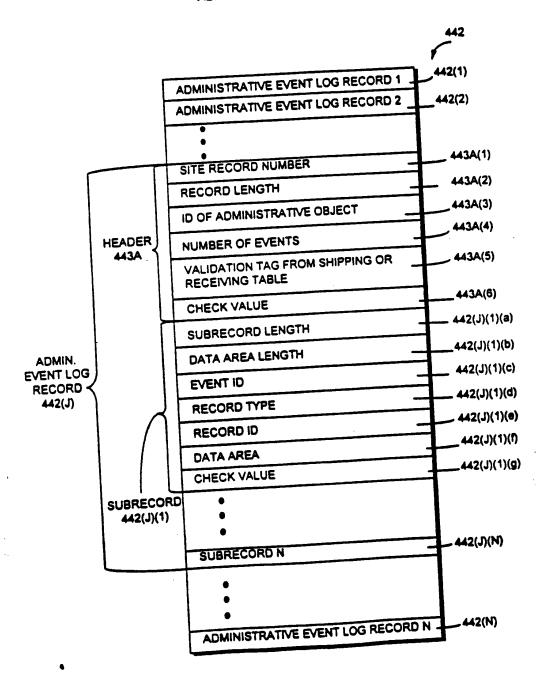
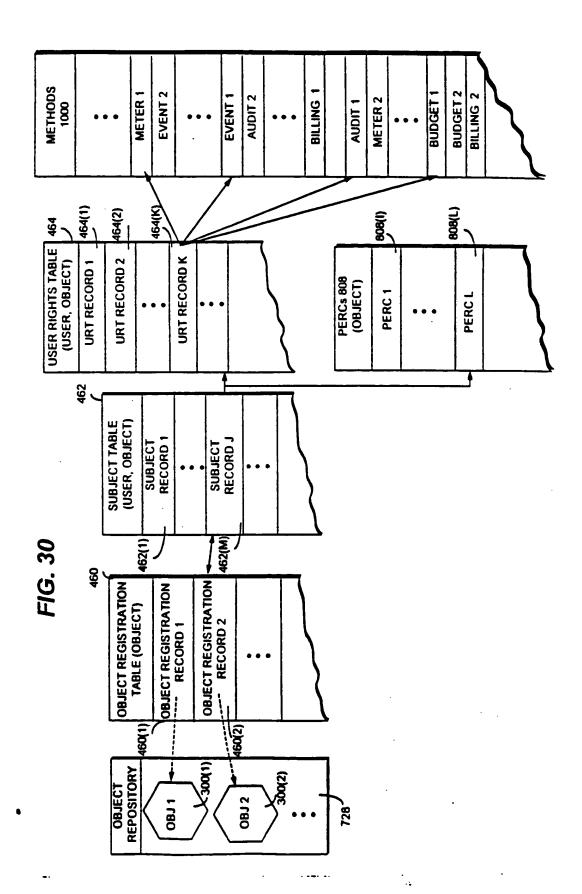


FIG. 29
ADMINISTRATIVE EVENT LOG



41.47



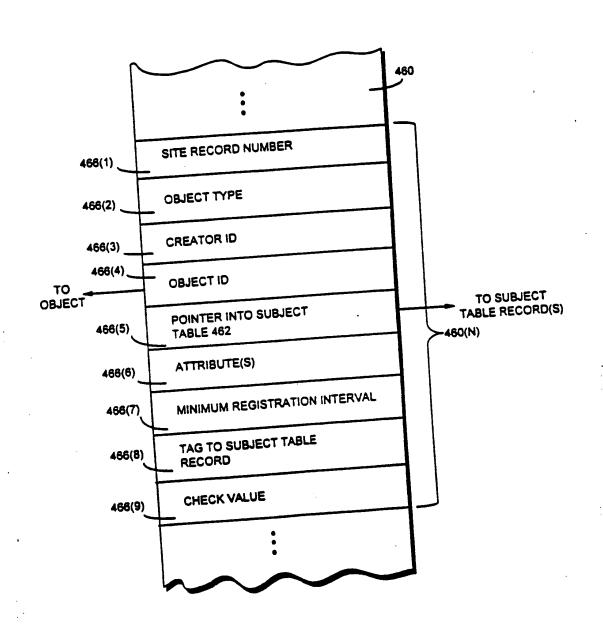
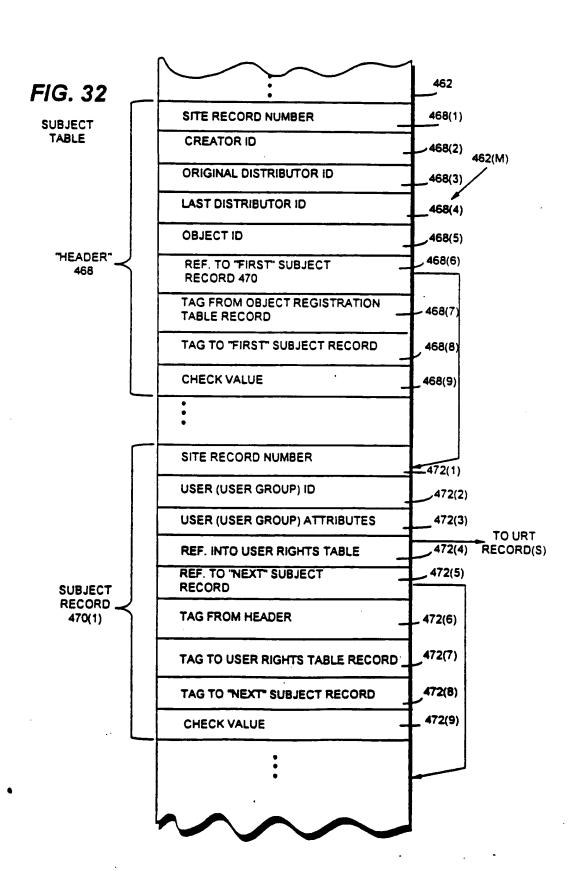
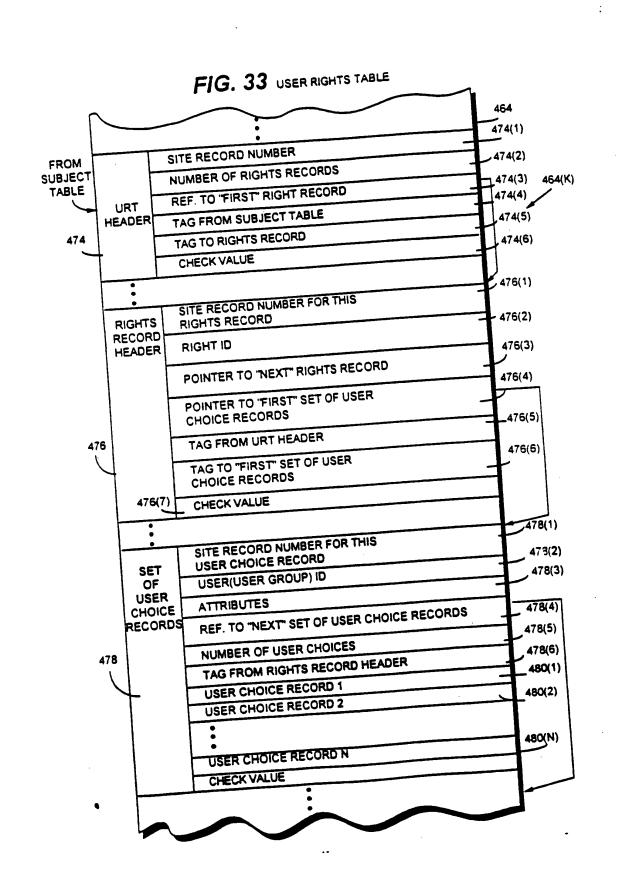


FIG. 31
OBJECT REGISTRATION TABLE





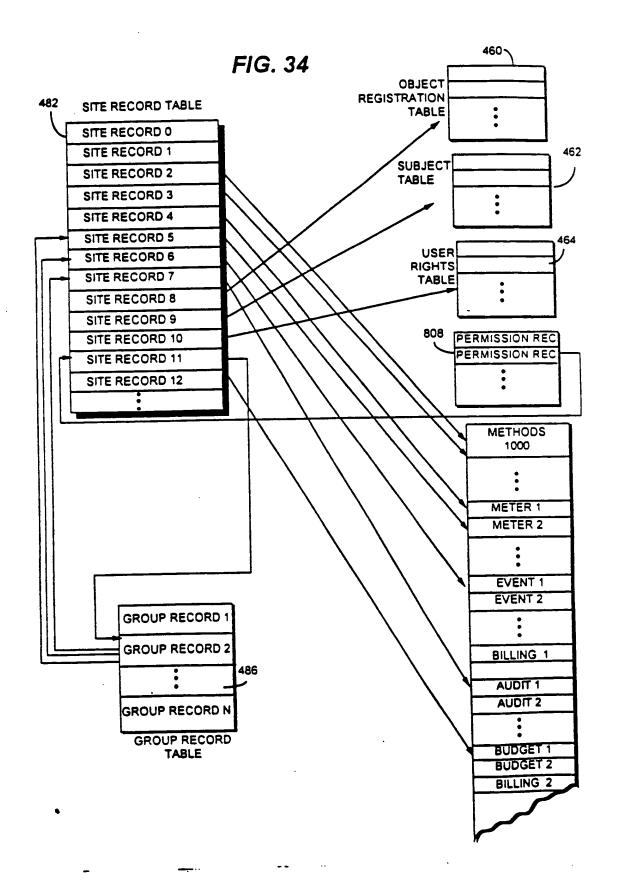


FIG. 34A

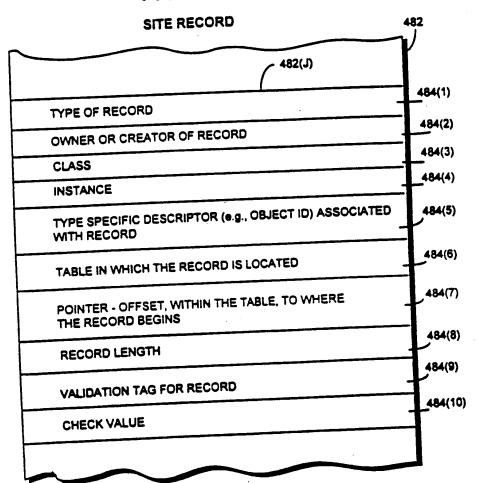
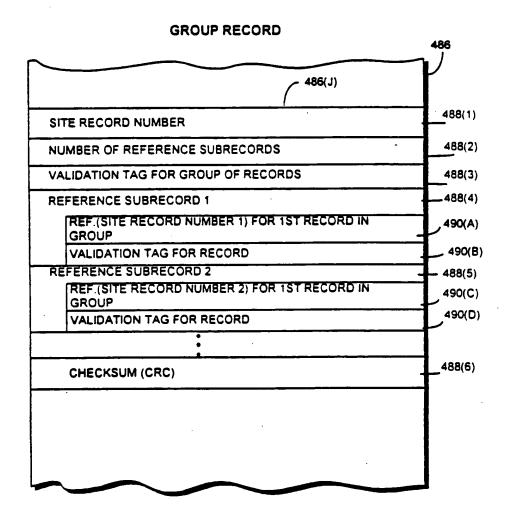
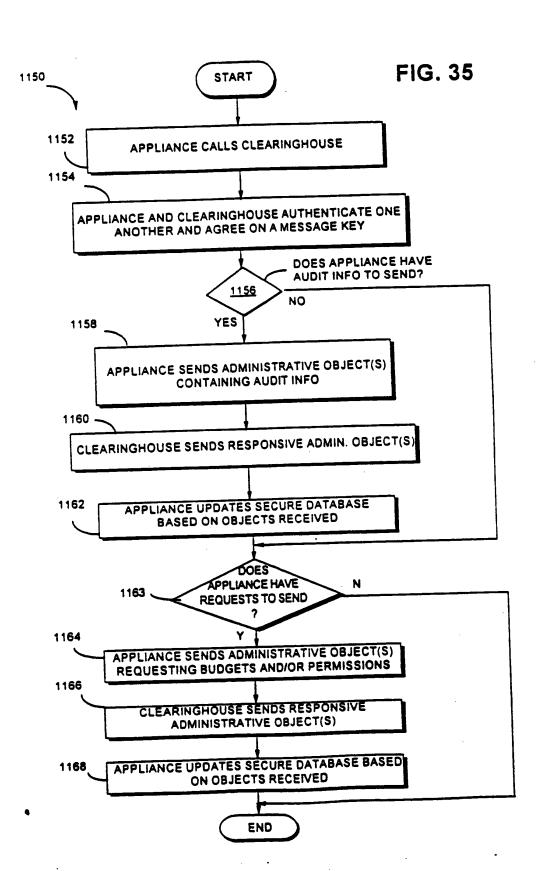
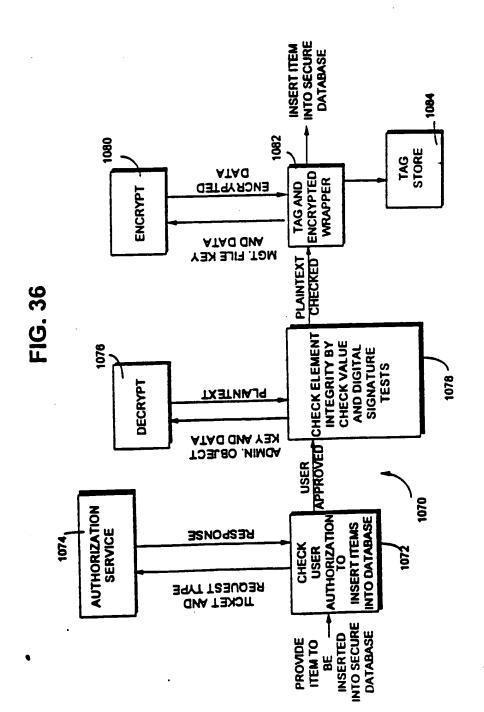


FIG. 34B







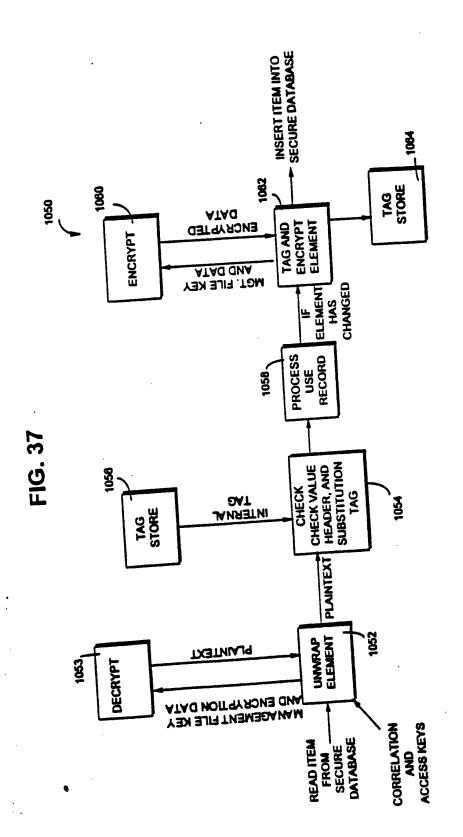
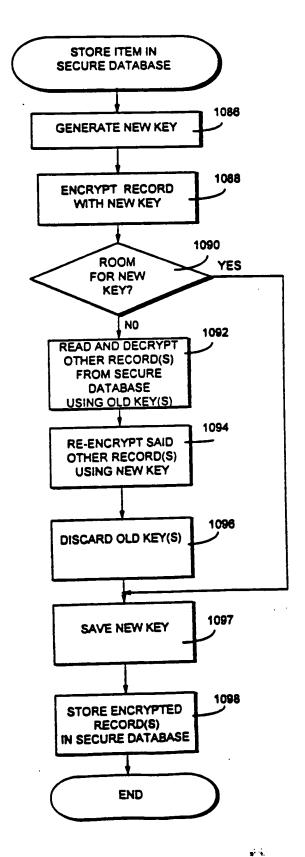
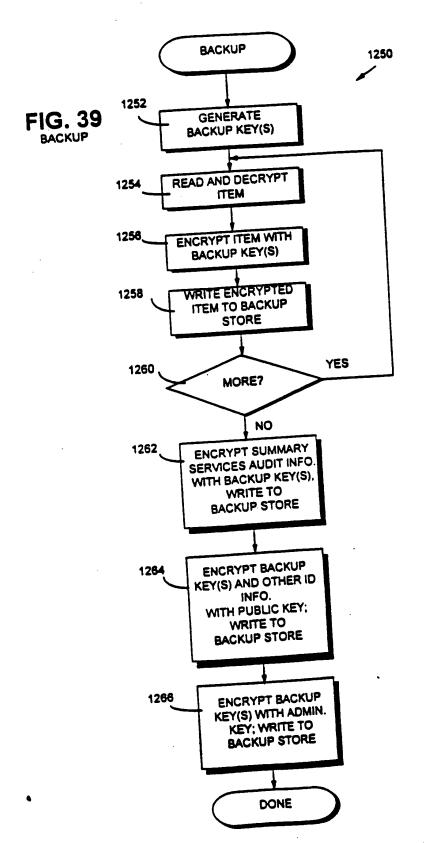


FIG. 38





 $z = 1 - \lambda$

x; •, ...

START FIG. 40 1270 **ESTABLISH** RECOVER SECURE DATABASE SECURE COMMUNICATIONS 1268 1272 EXTRACT "WORK IN PROGRESS" AND SUMMARY VALUES 1274 REQUEST CURRENT BACKUP FROM SPU 1276 RESET SUMMARY VALUES AND COUNTERS CONSISTENT WITH LAST BACKUP 1278 RESTORE SECURE DB FROM BACKUP 1280 COMPUTE BILLS BASED ON RECOVERED VALUES 1282 PERFORM OTHER ACTIONS TO RECOVER FROM SPU DOWNTIME

v. £ 4

END

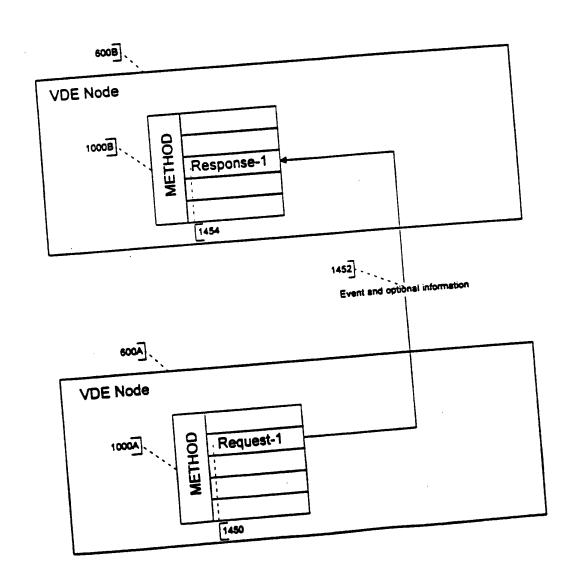
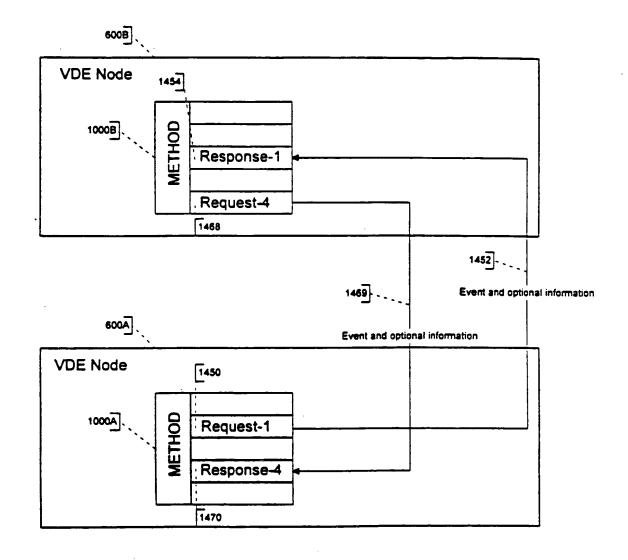
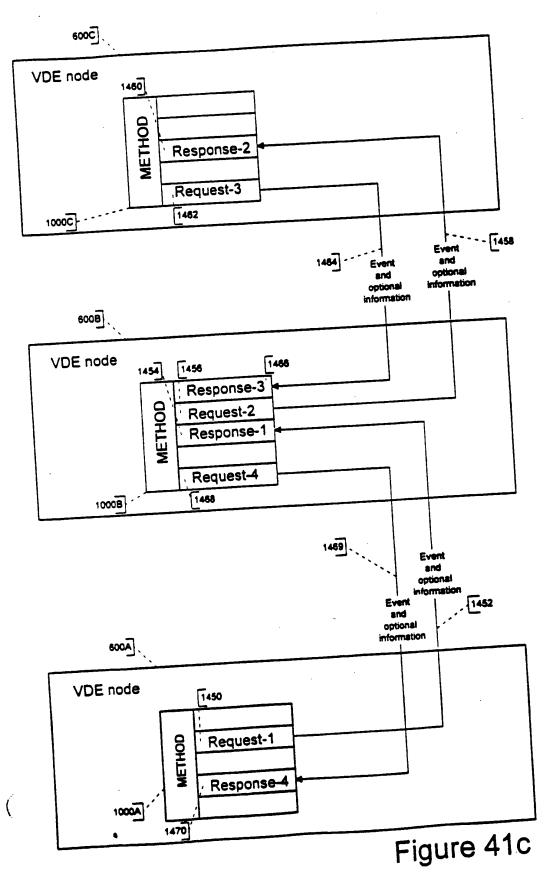


Figure 41a





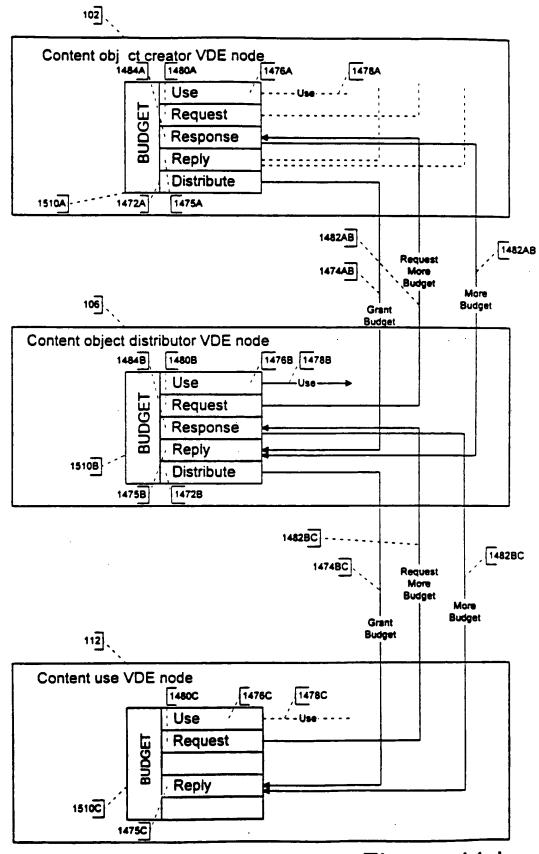
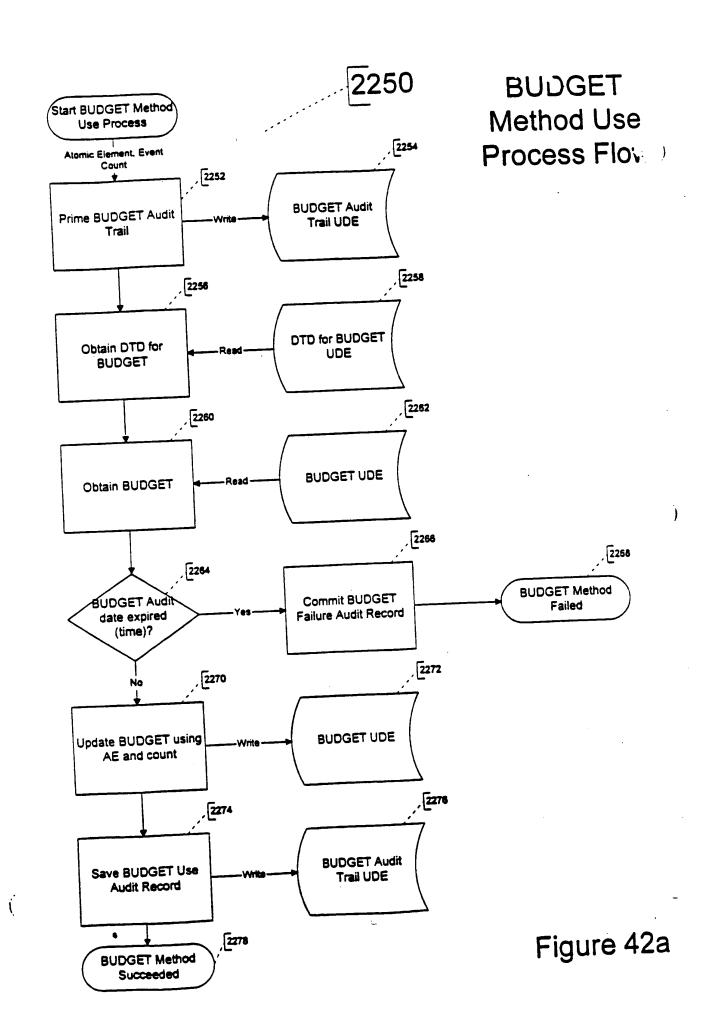
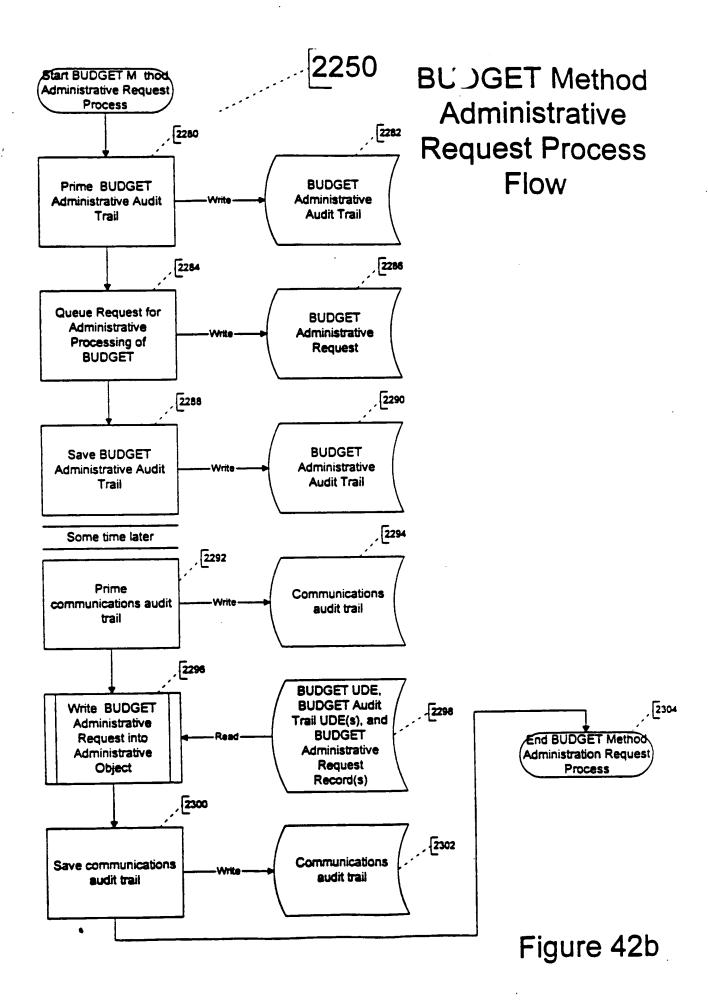
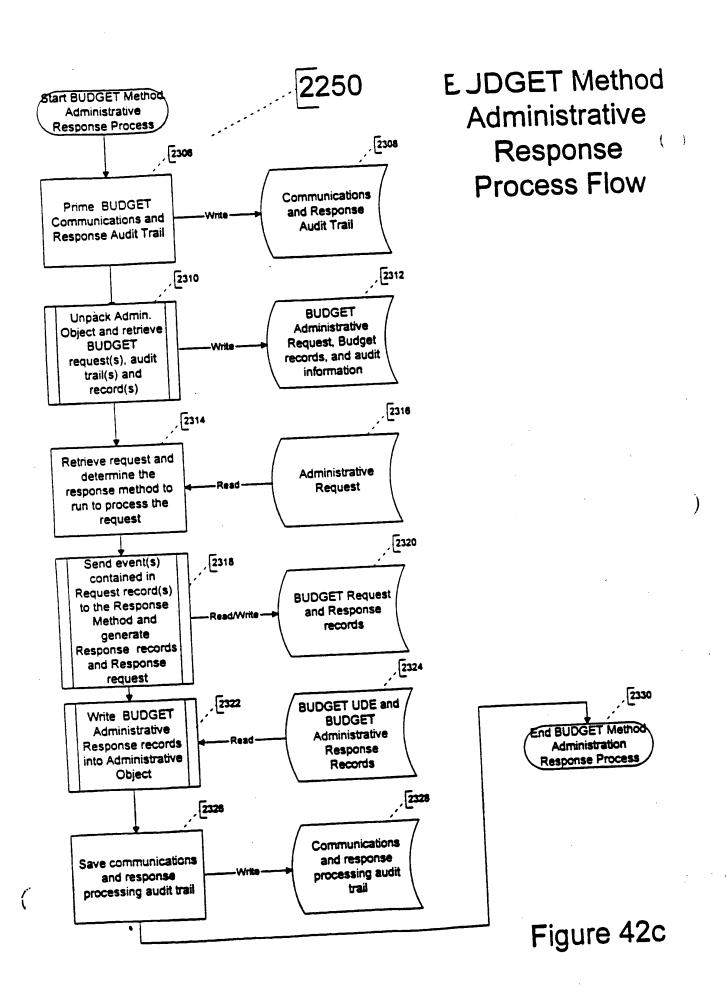
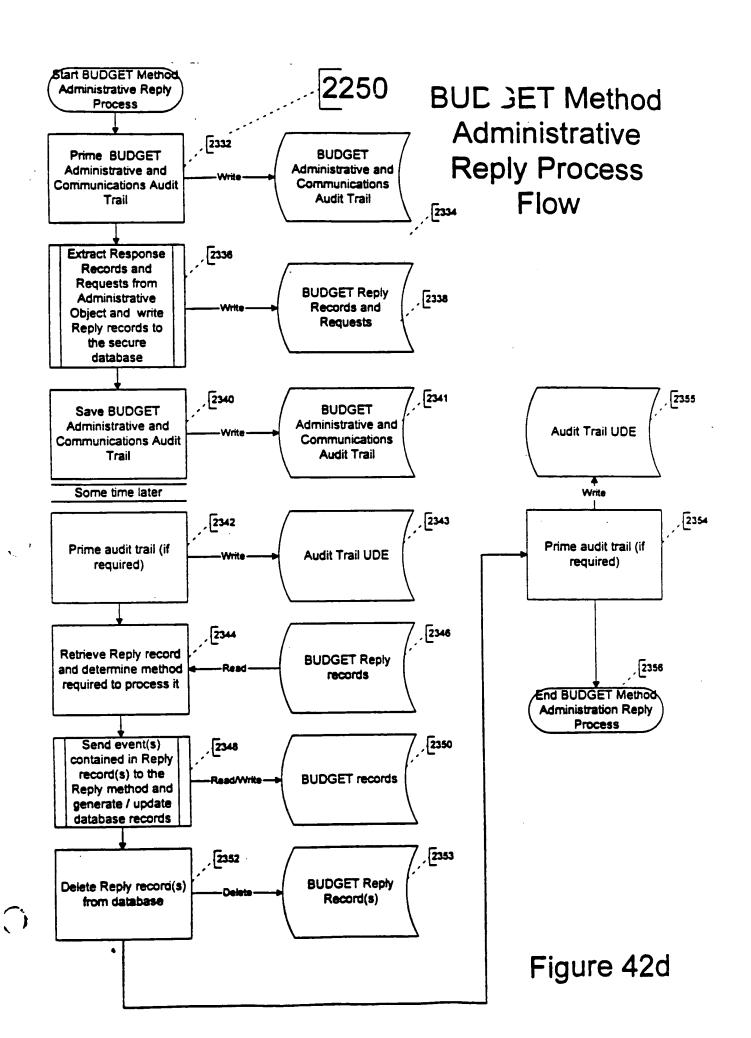


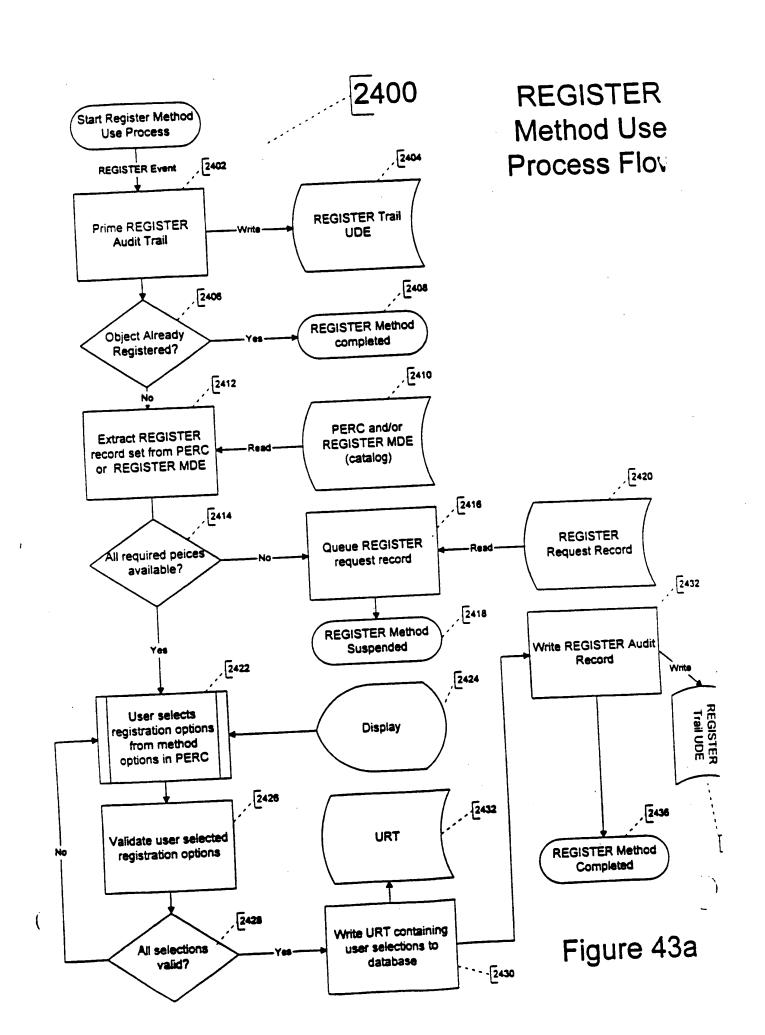
Figure 41d

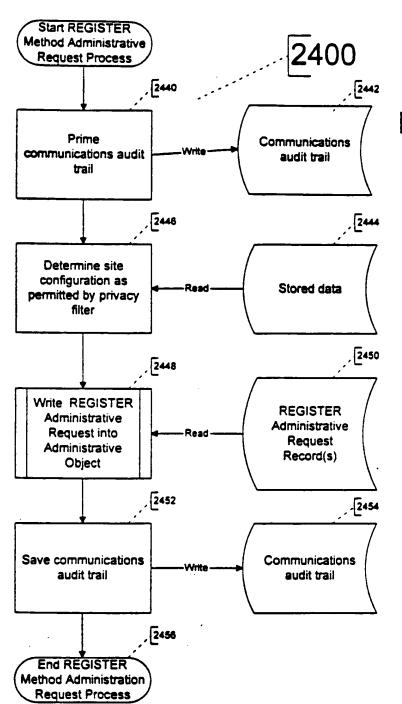




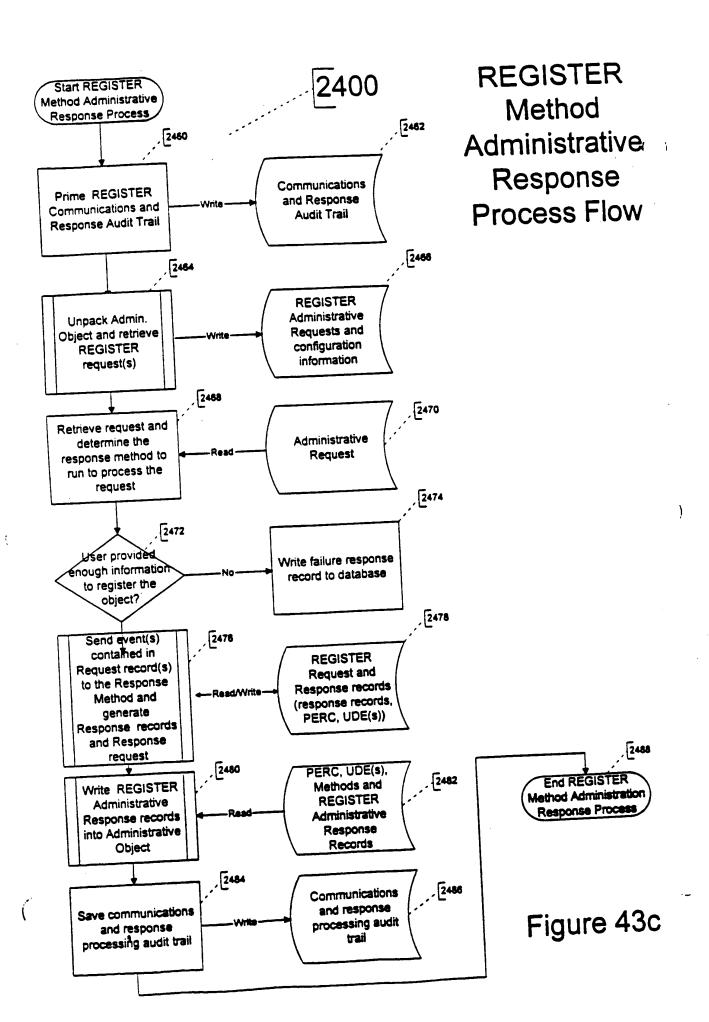


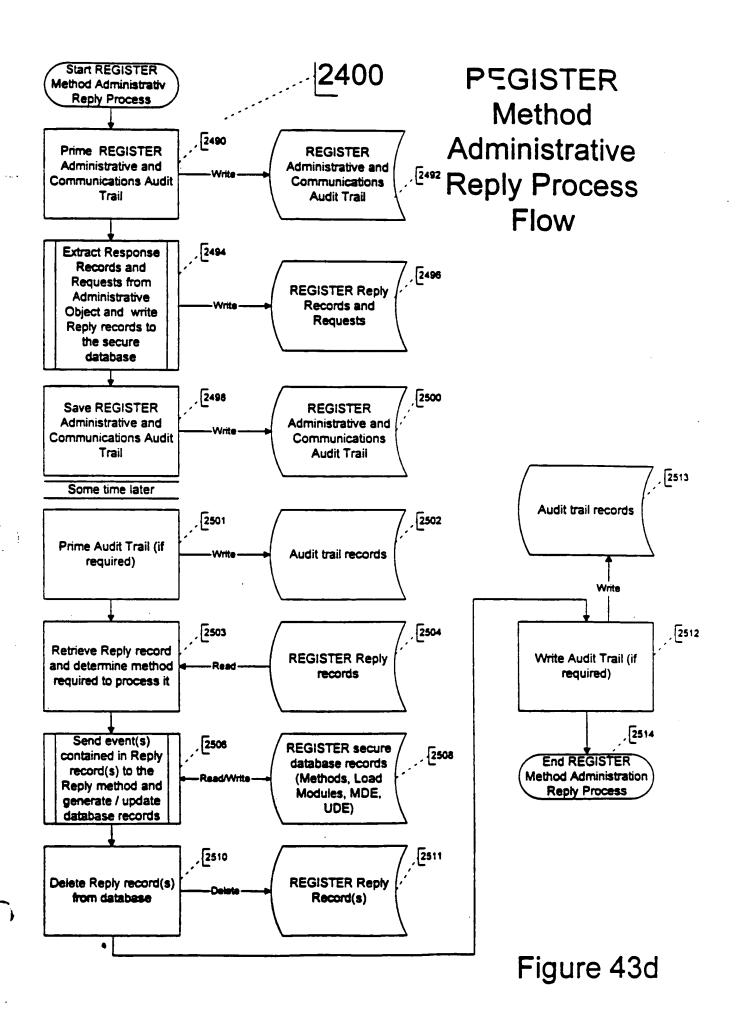


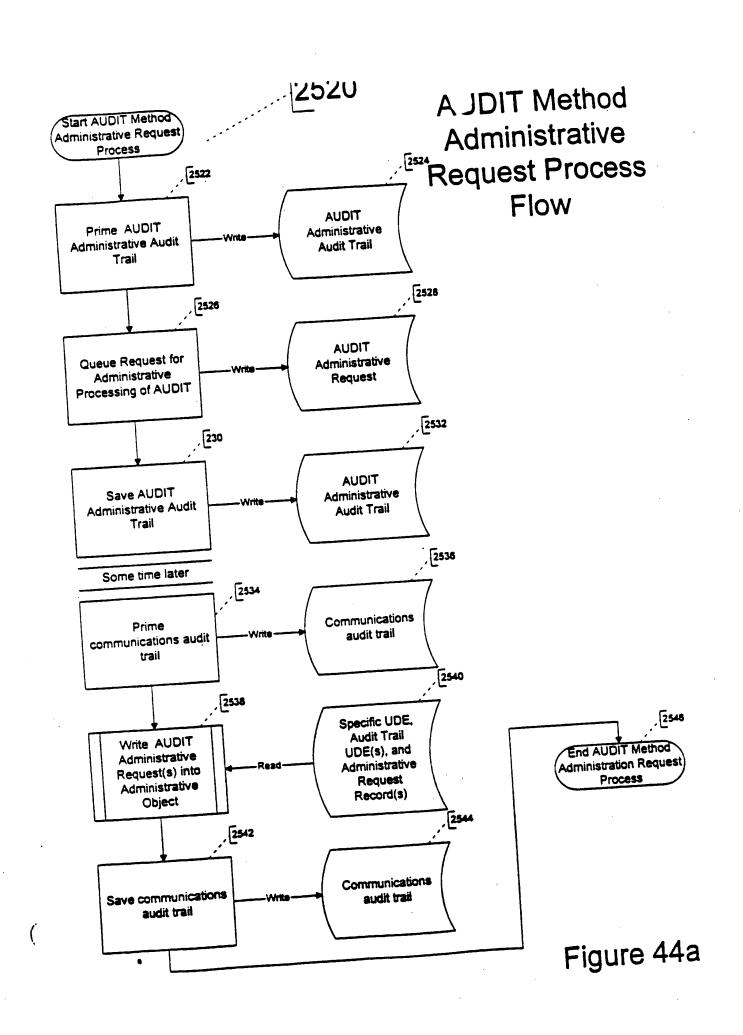


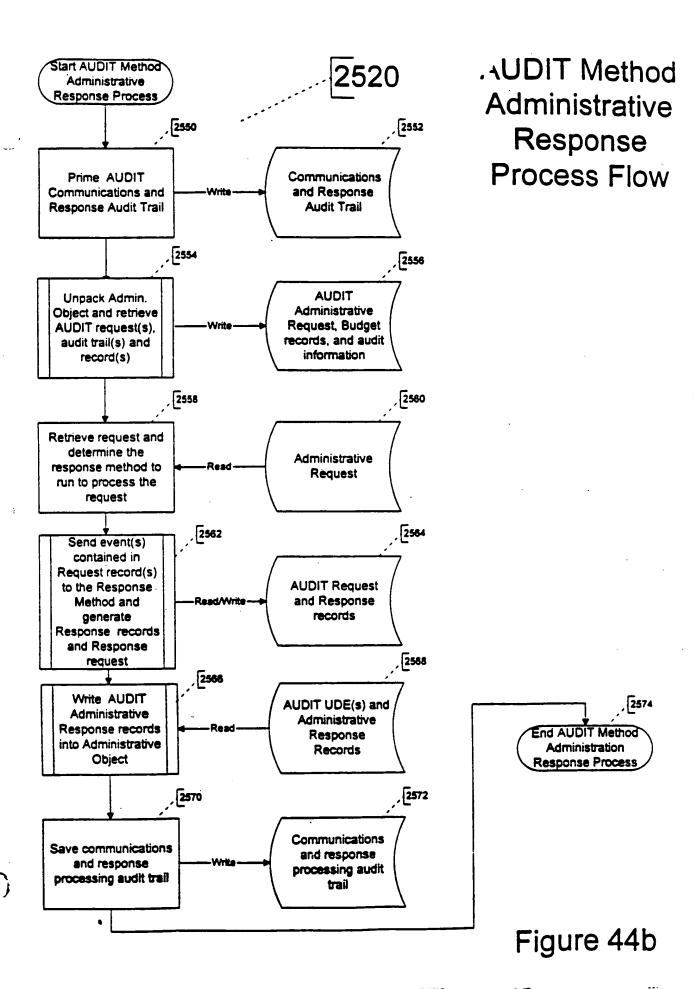


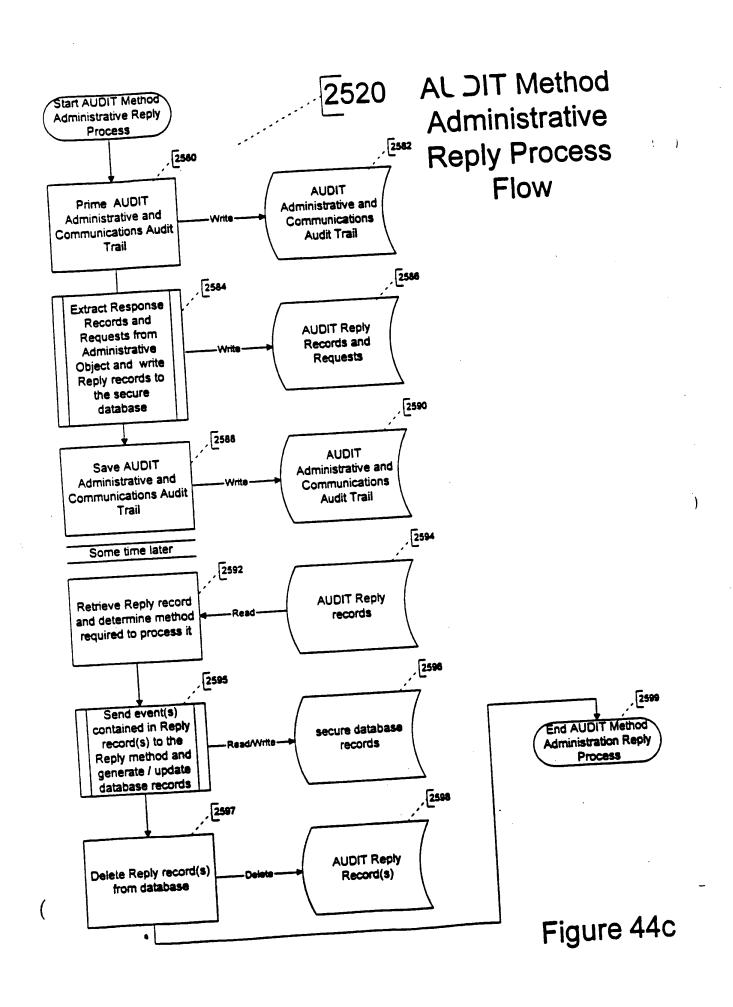
REGISTER Method Administrative Request Process Flow











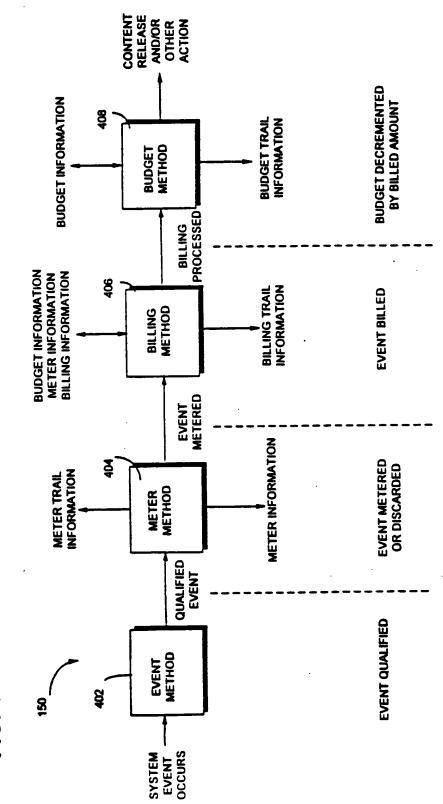
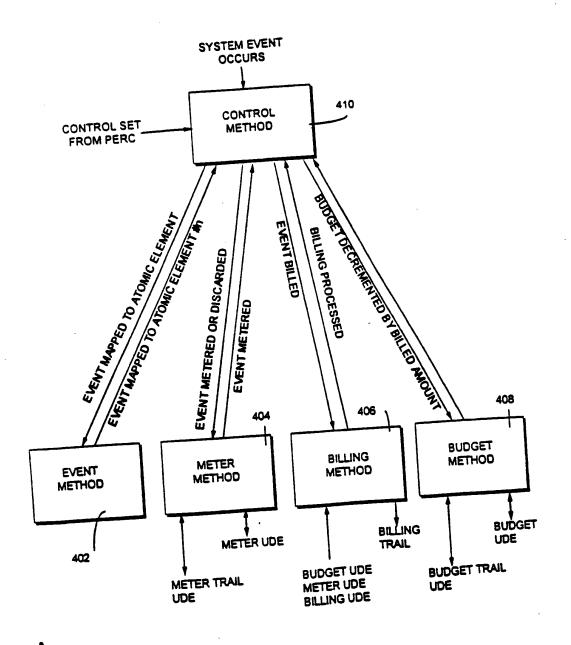
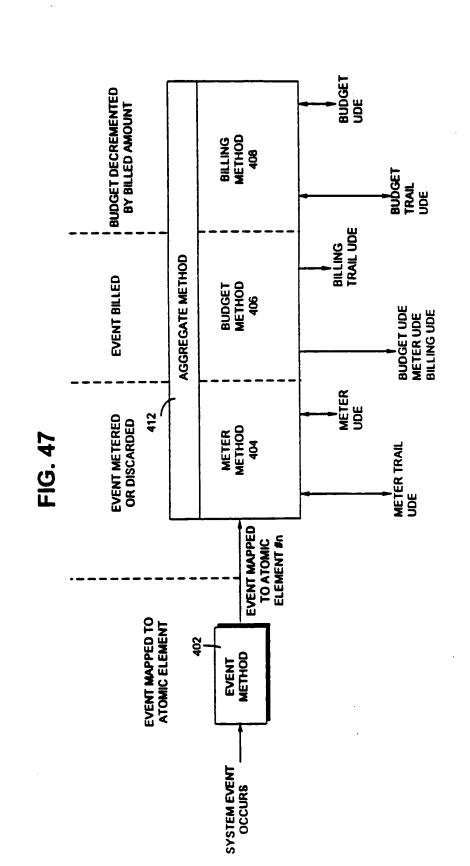
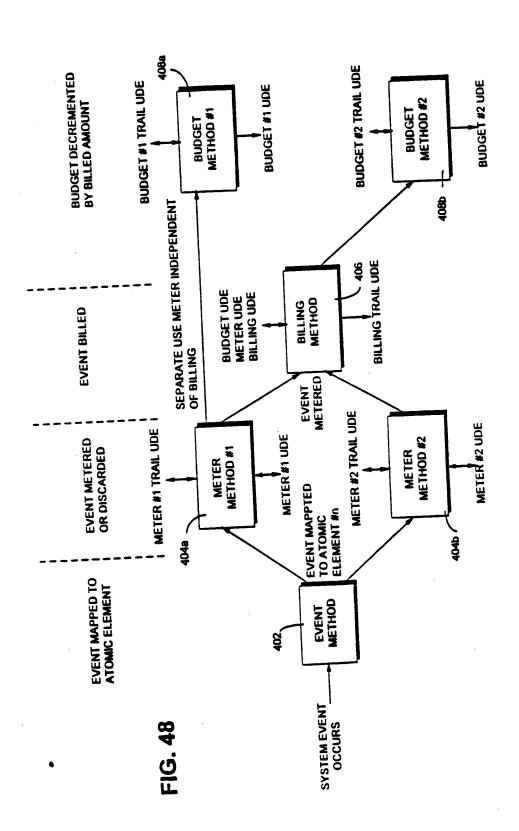


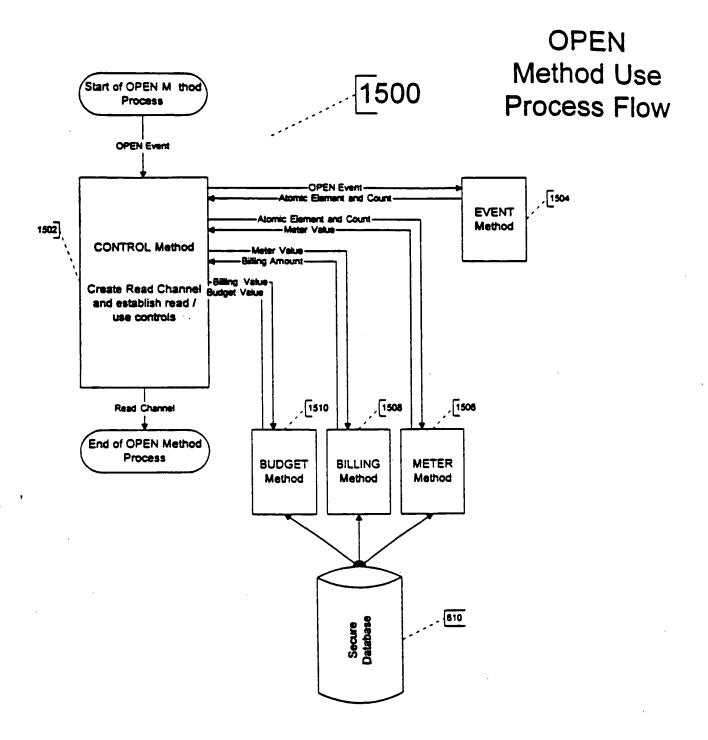
FIG. 4

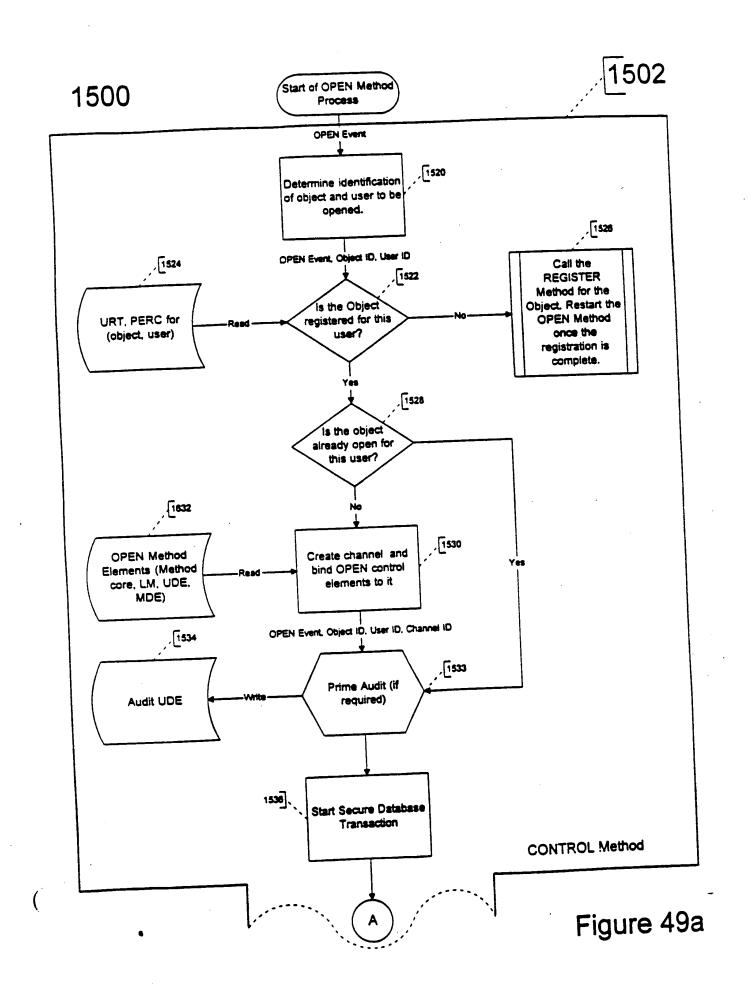
FIG. 46

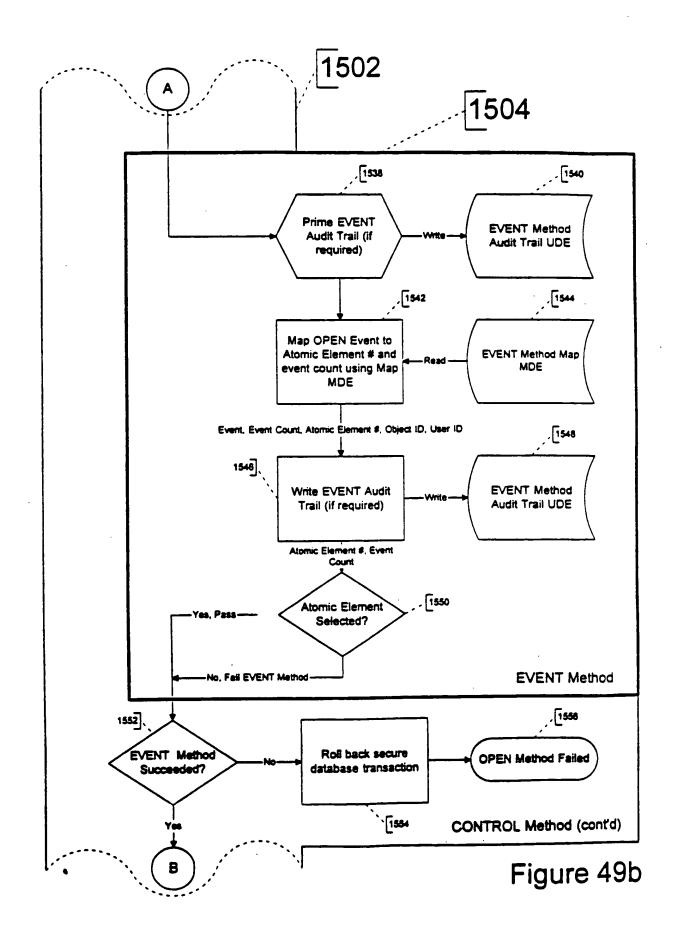


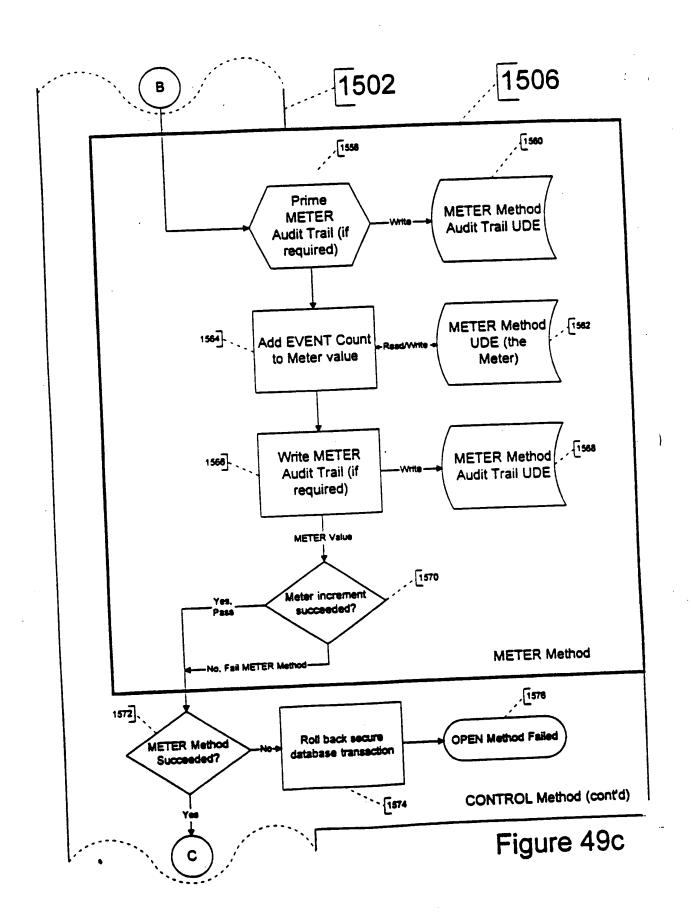


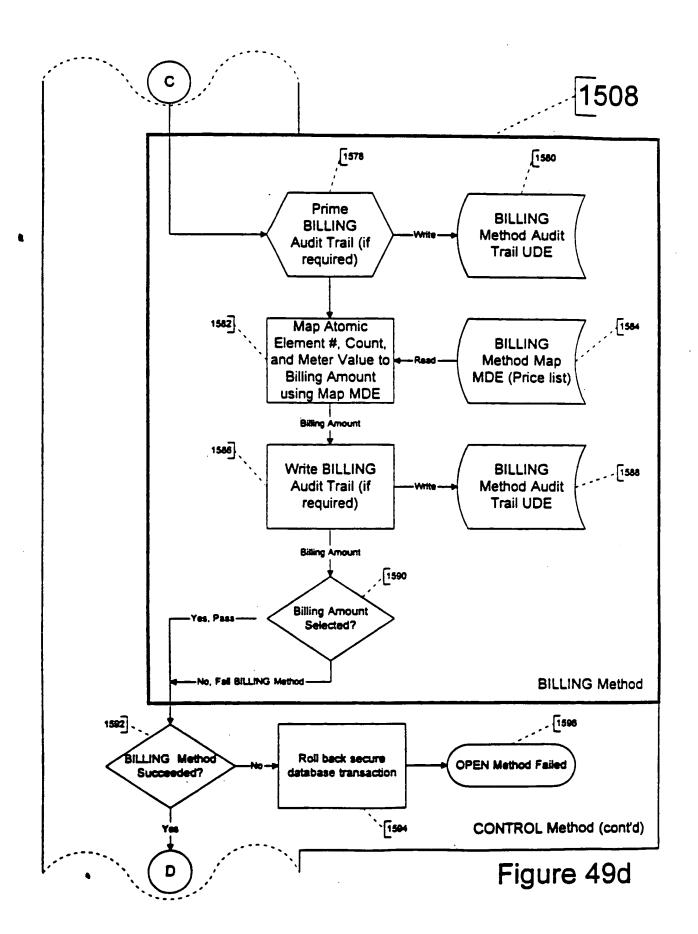


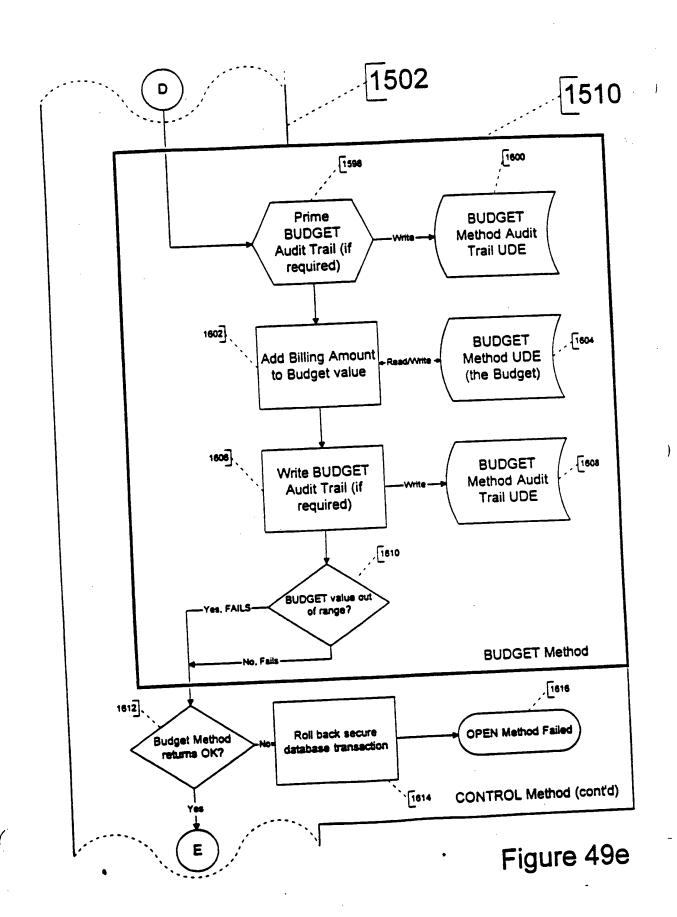












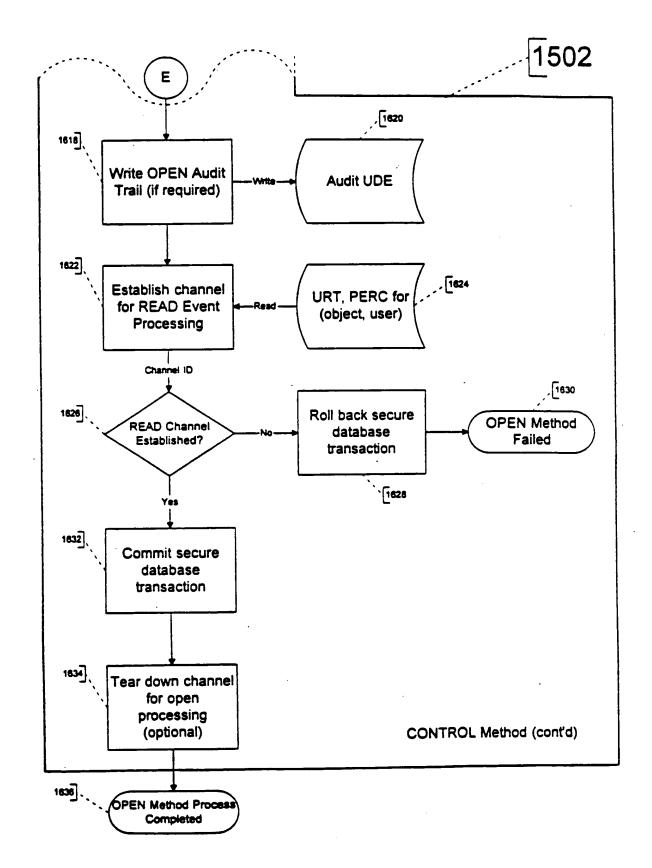
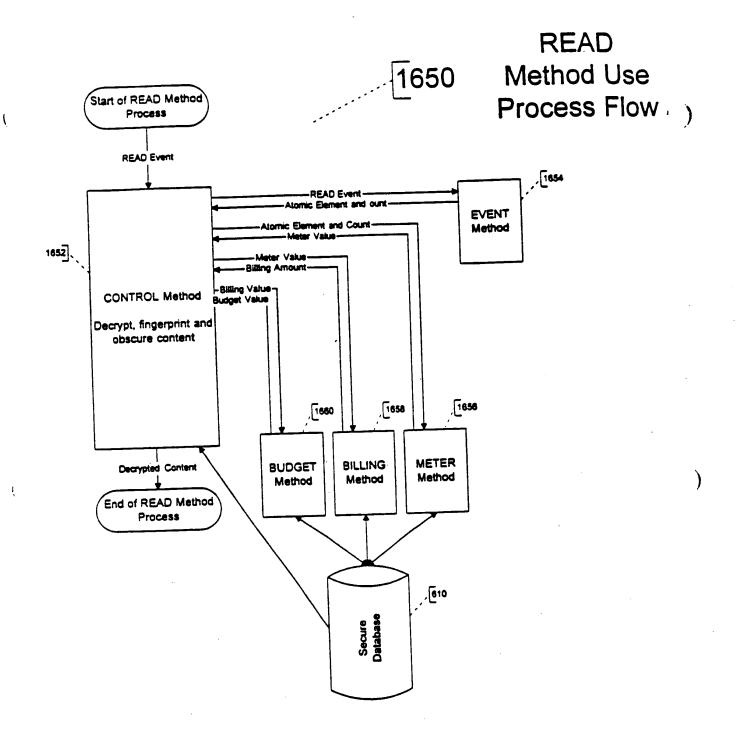
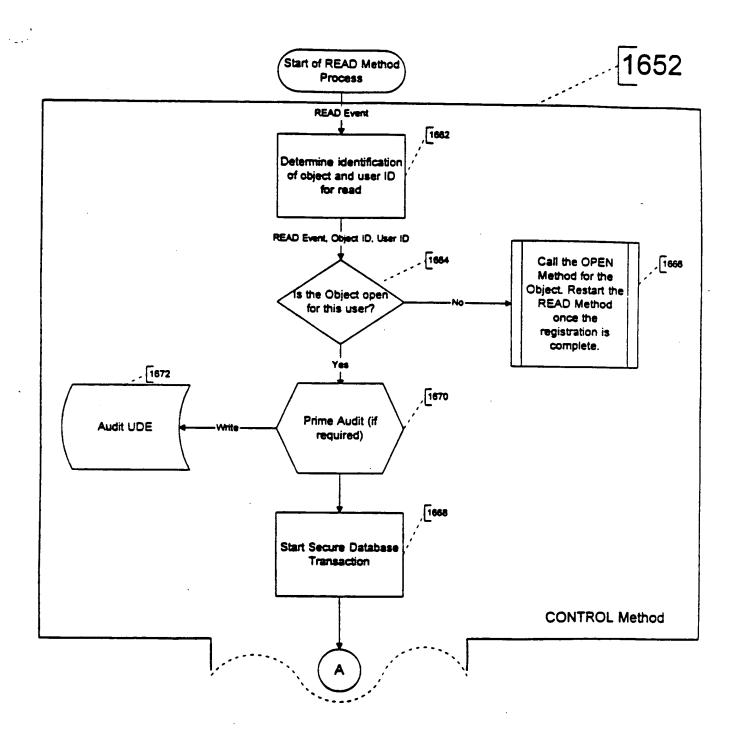
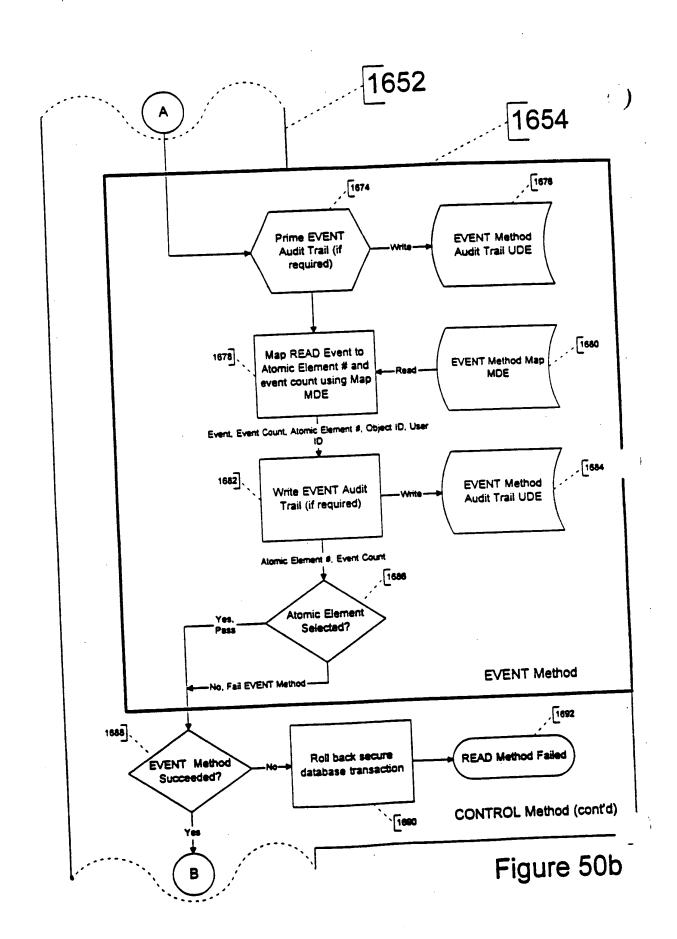
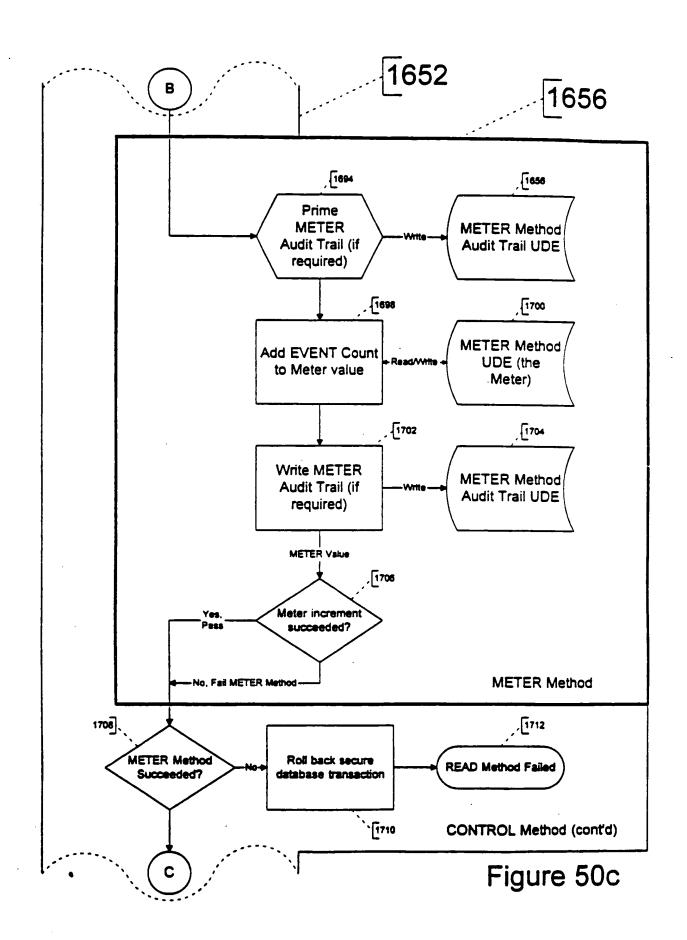


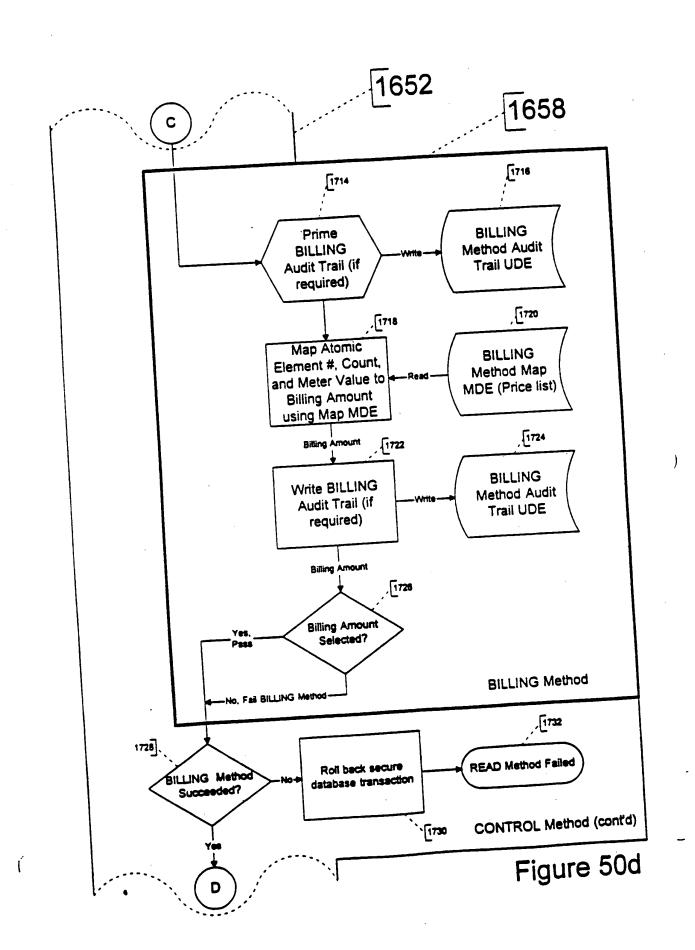
Figure 49f

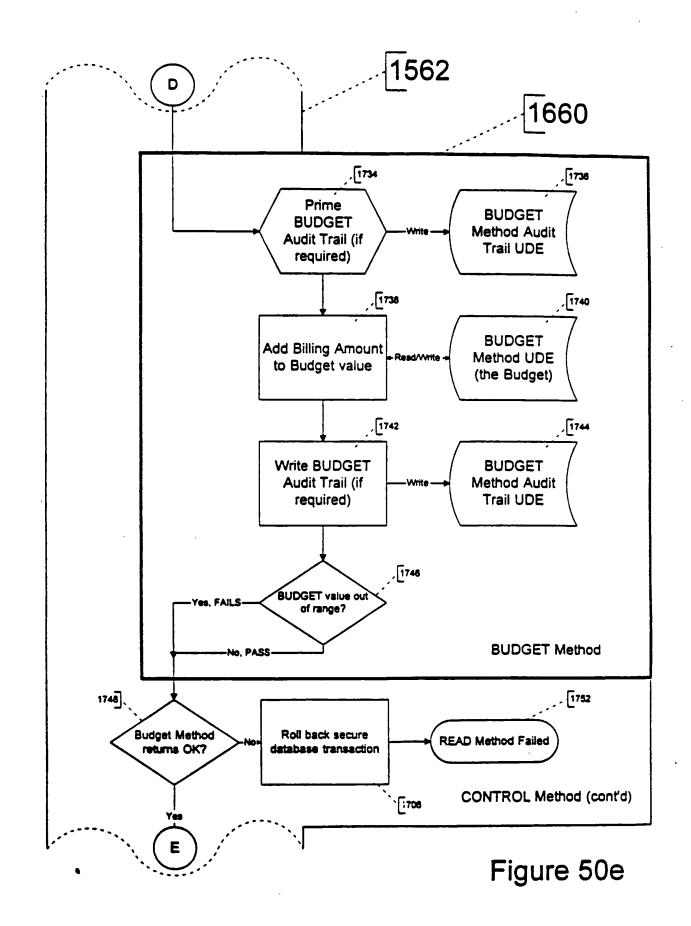


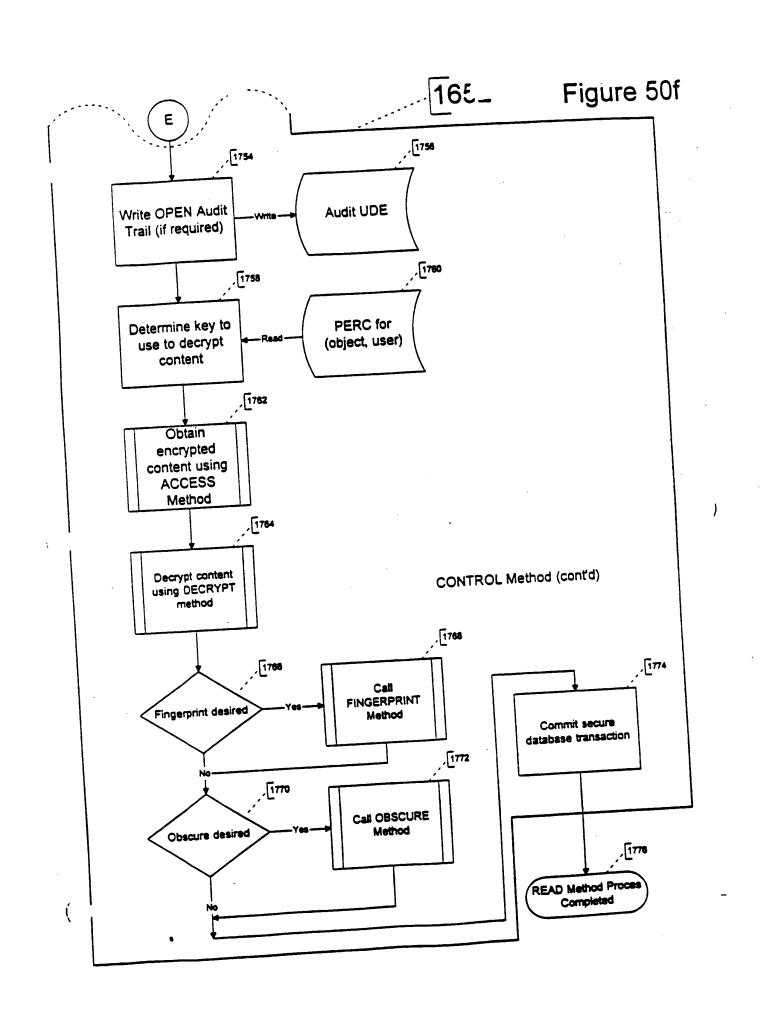


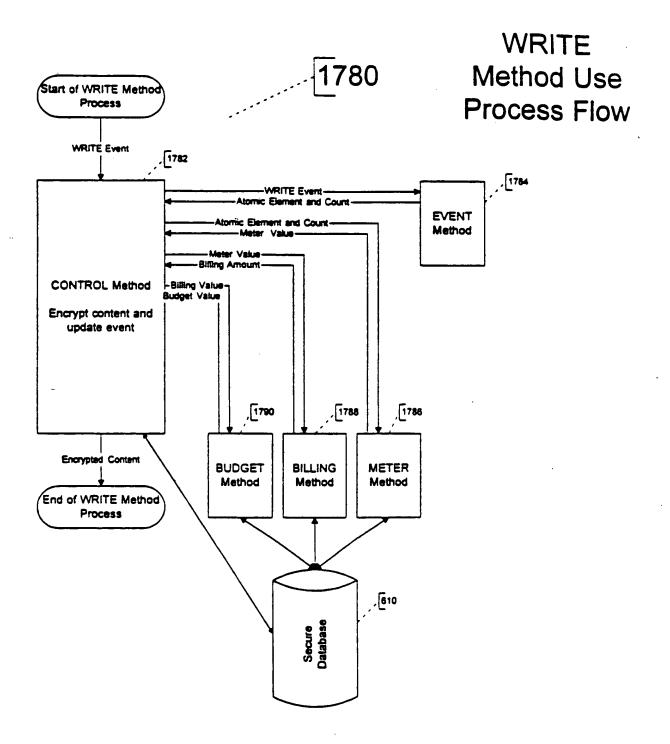












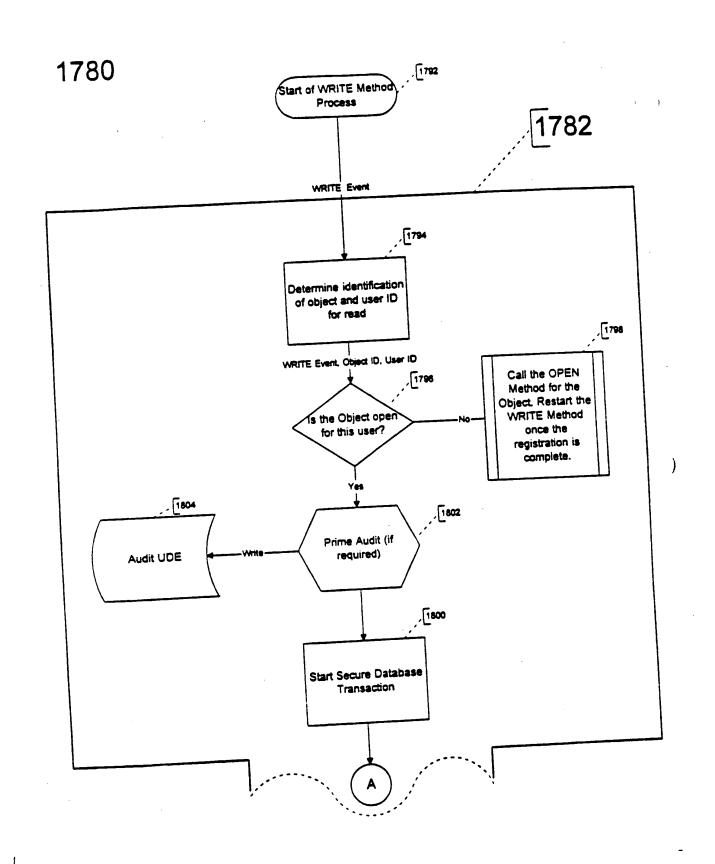
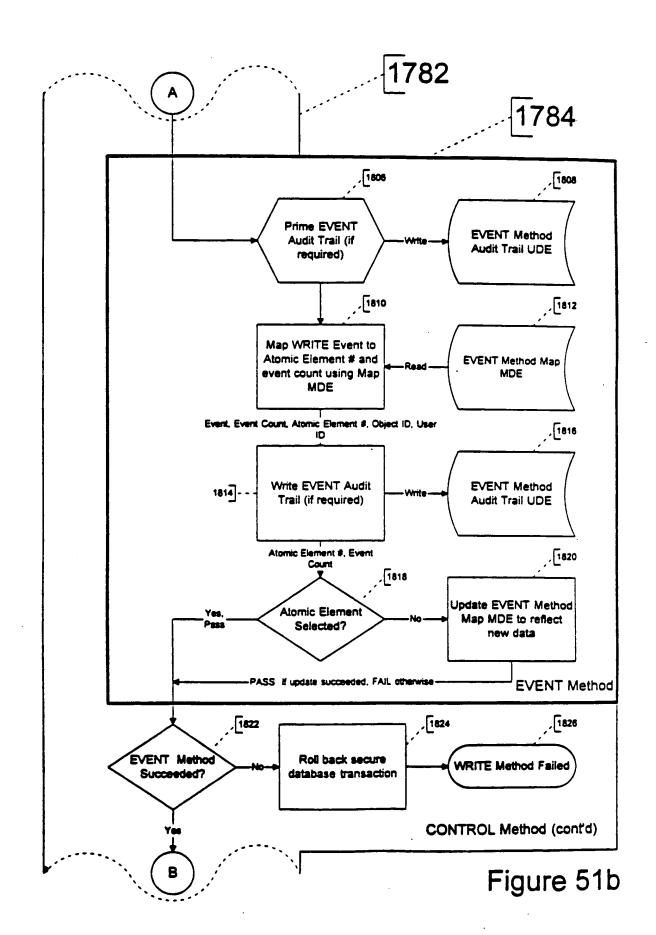
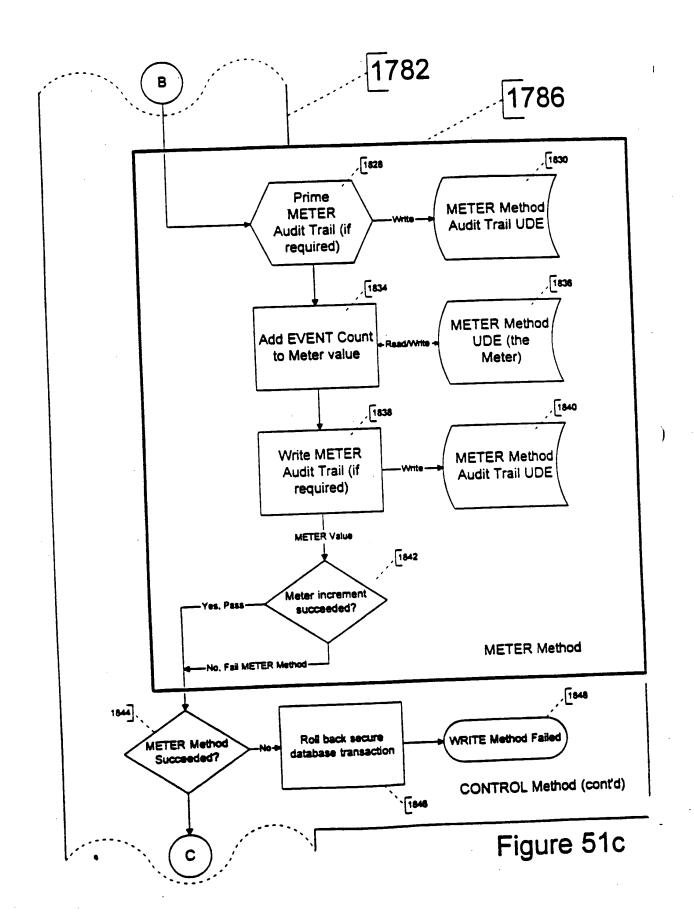
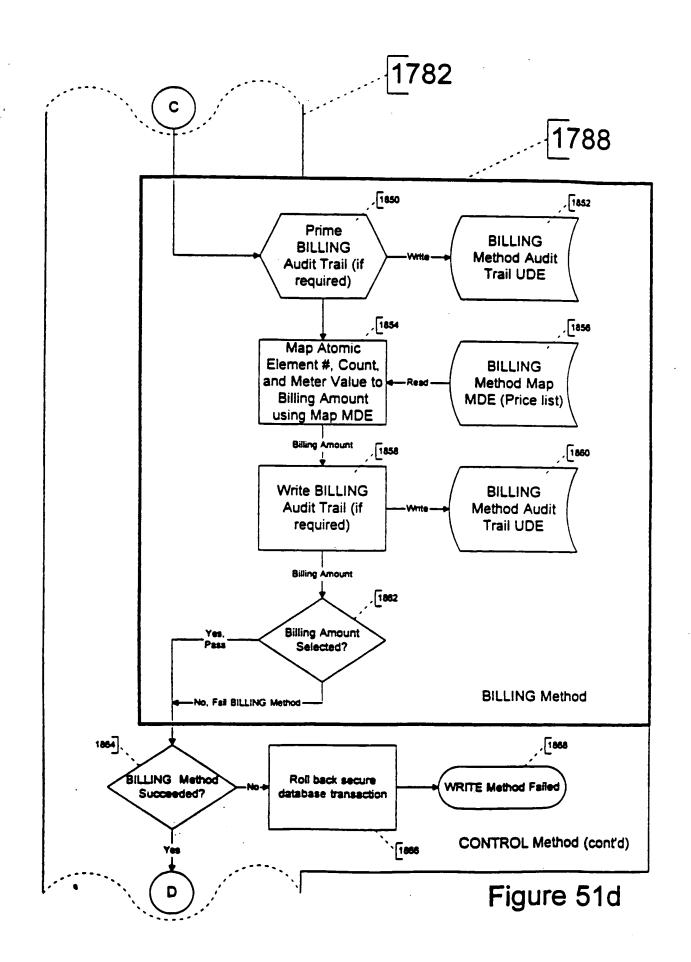
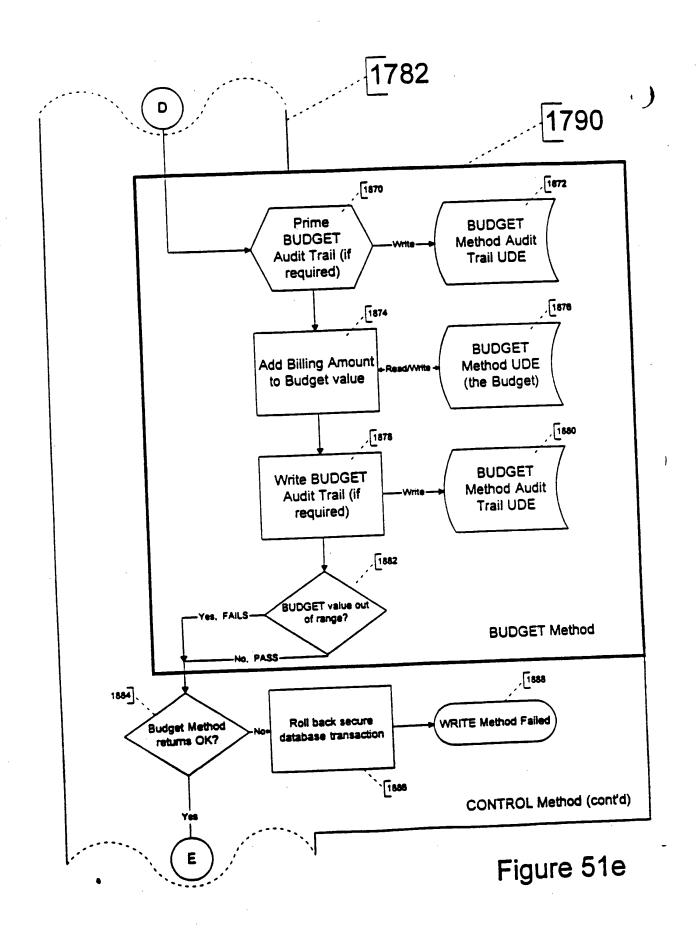


Figure 51a









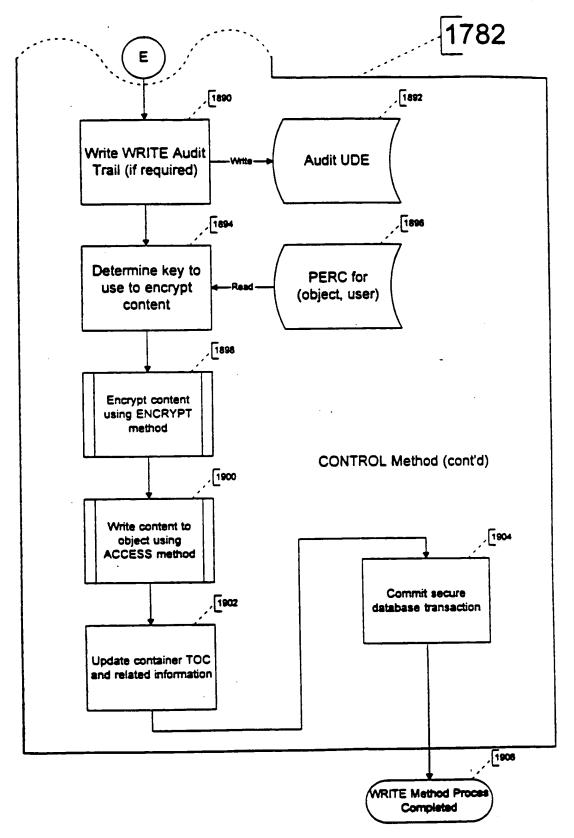
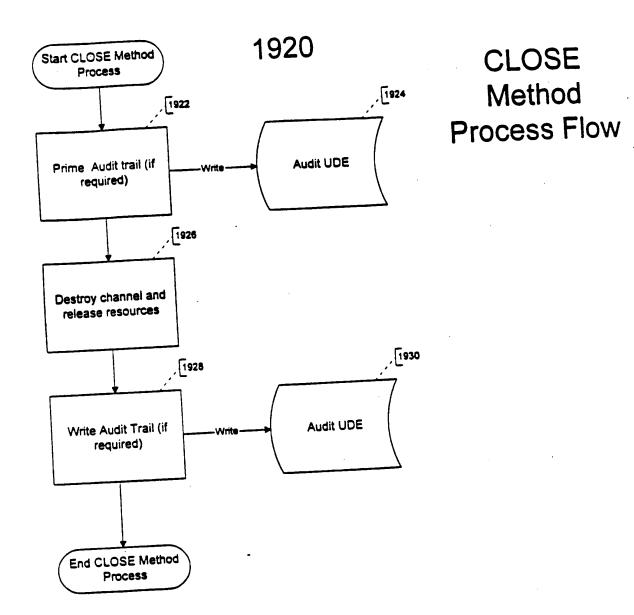
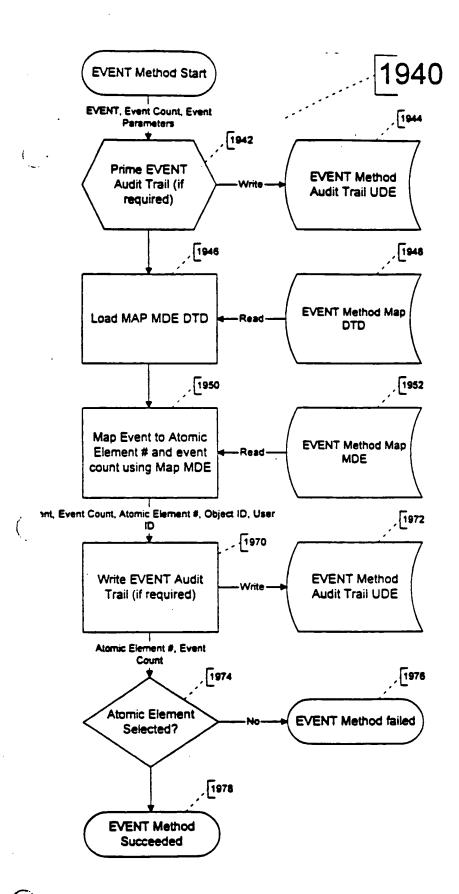
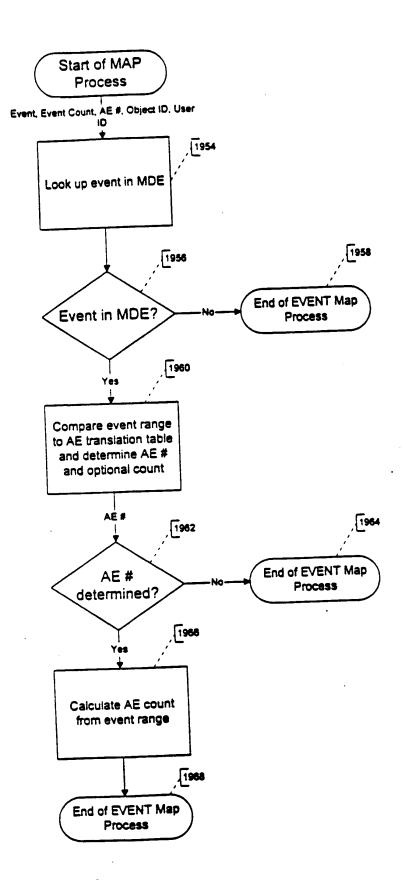


Figure 51f

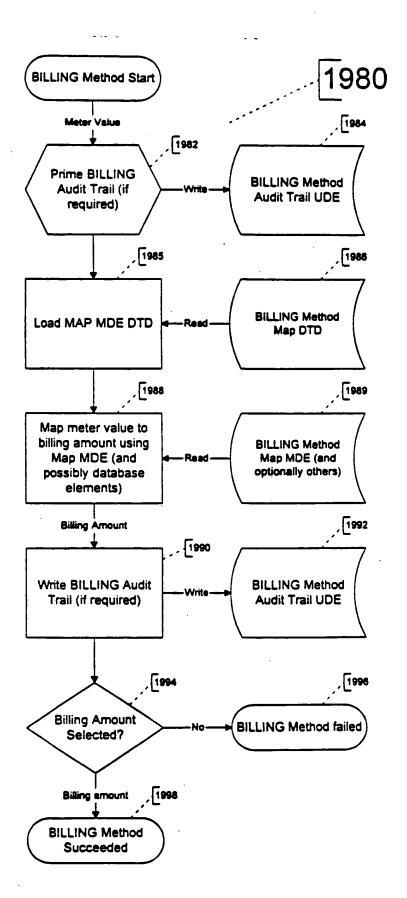




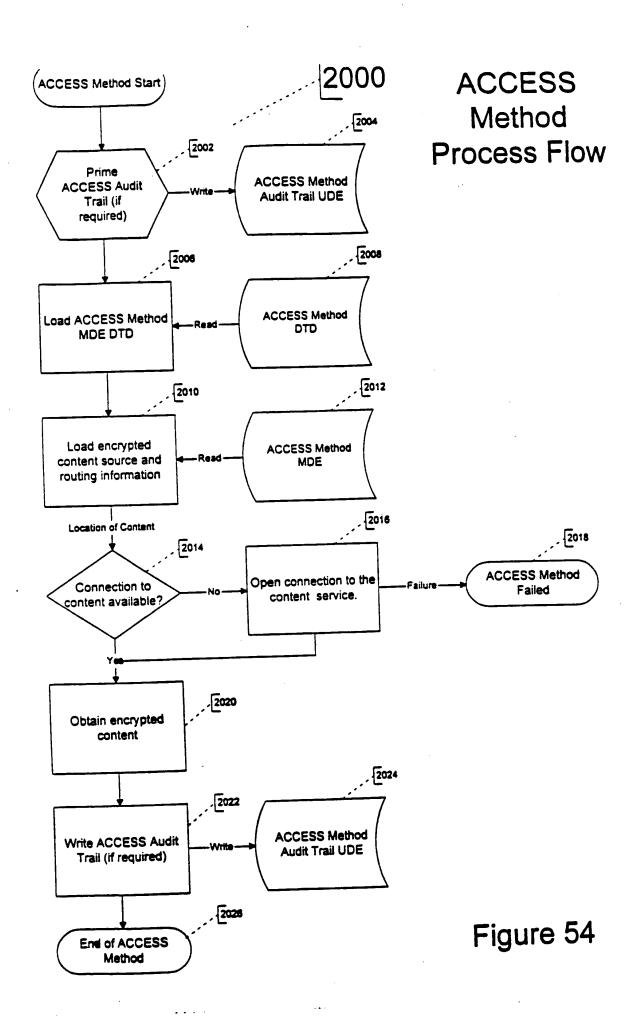
EVENI Method Process Flows

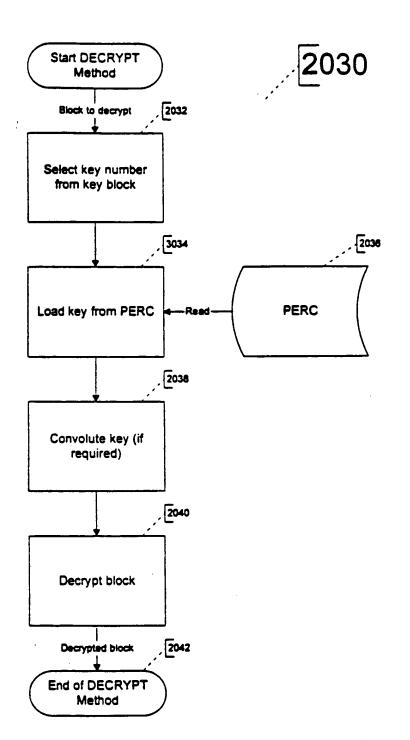


Sample EVENT Method Mapping Process

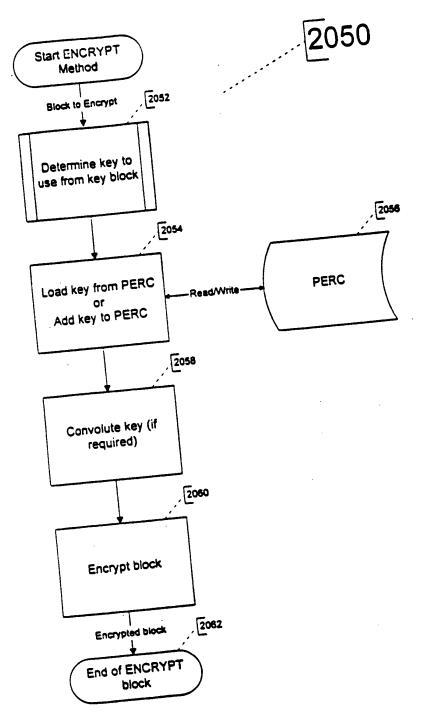


BILLING Method Process Flows

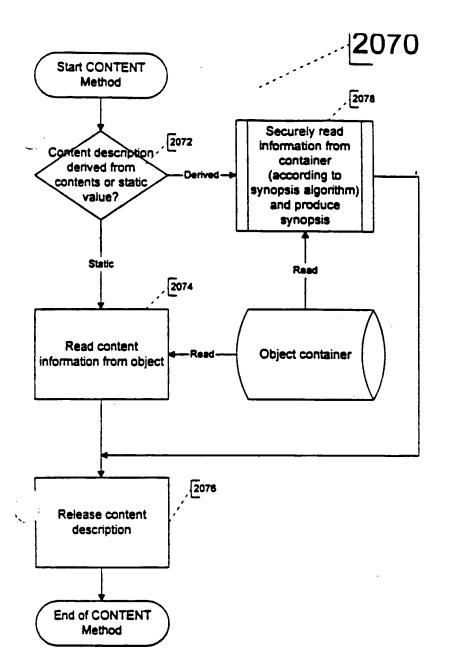




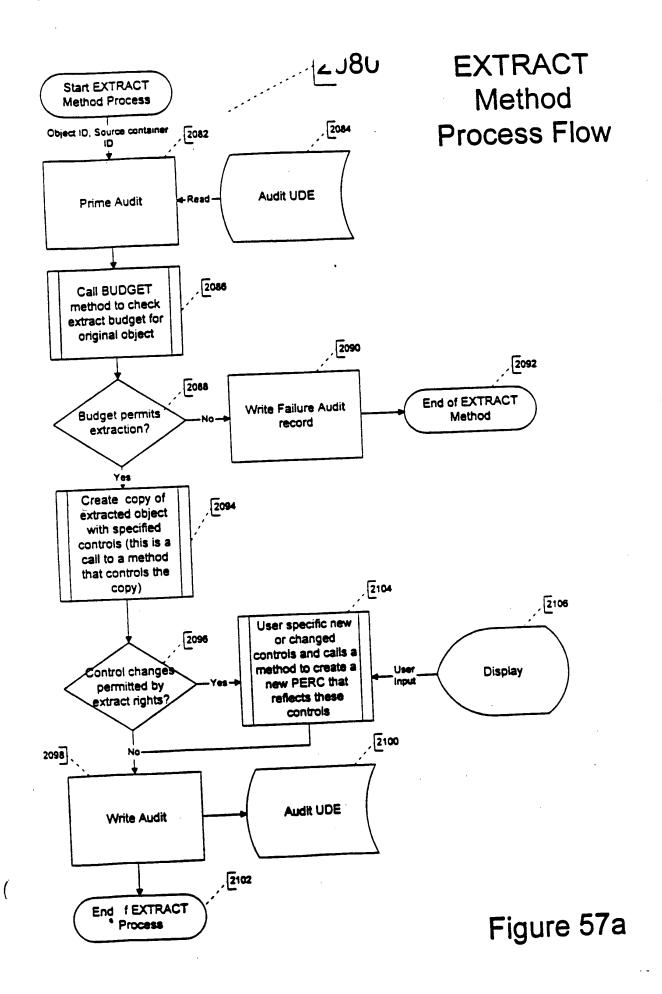
JECRYPT Method Process Flow

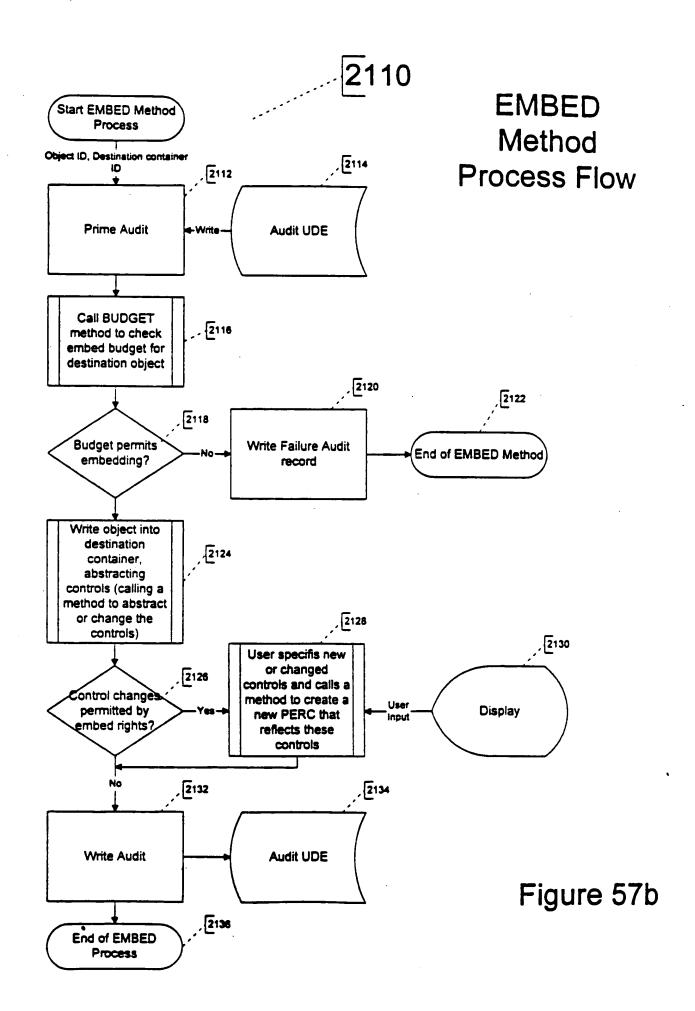


ENCRYPT Method Process Flow



CONTENT Method Process Flow





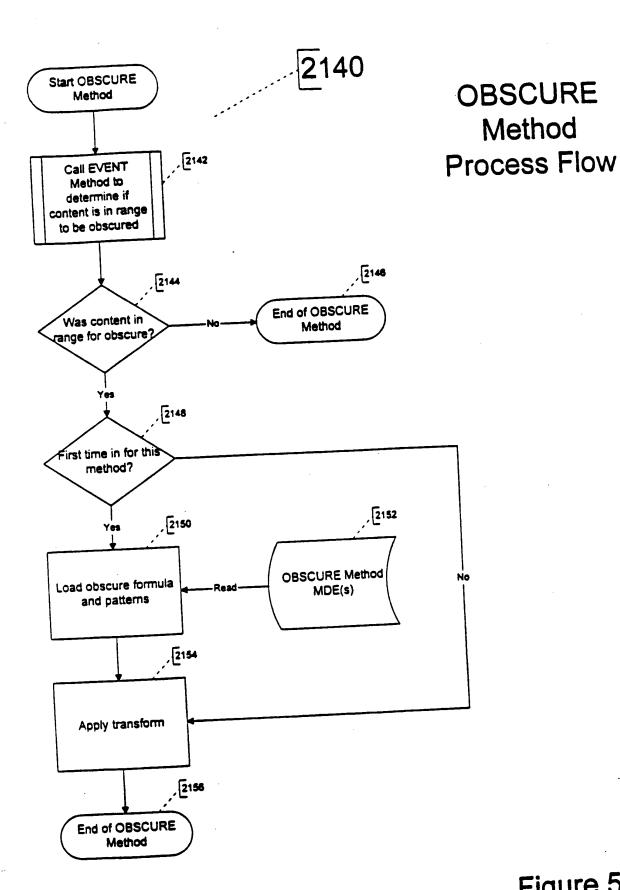
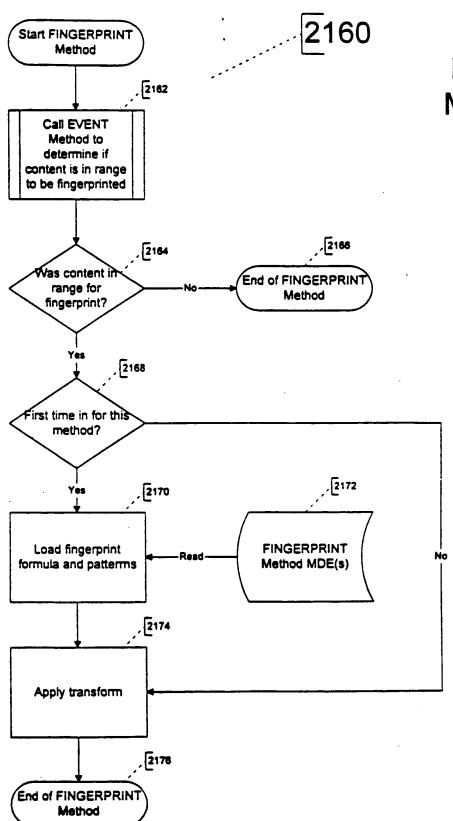


Figure 58a



FINGERPRINT Method Process Flow

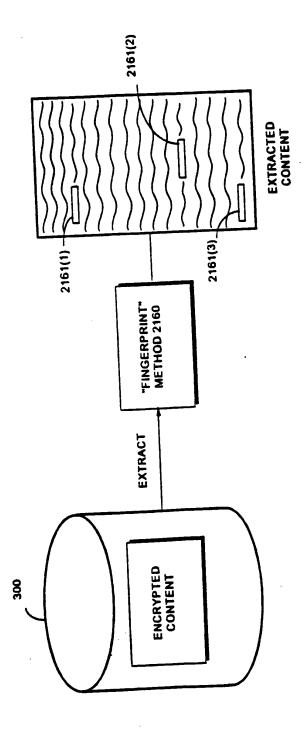
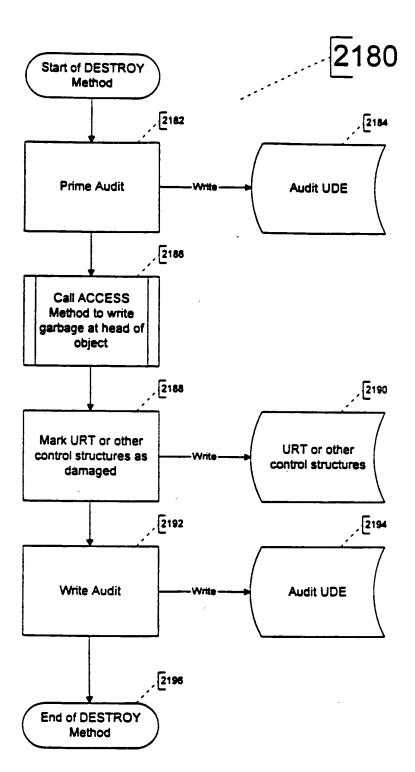
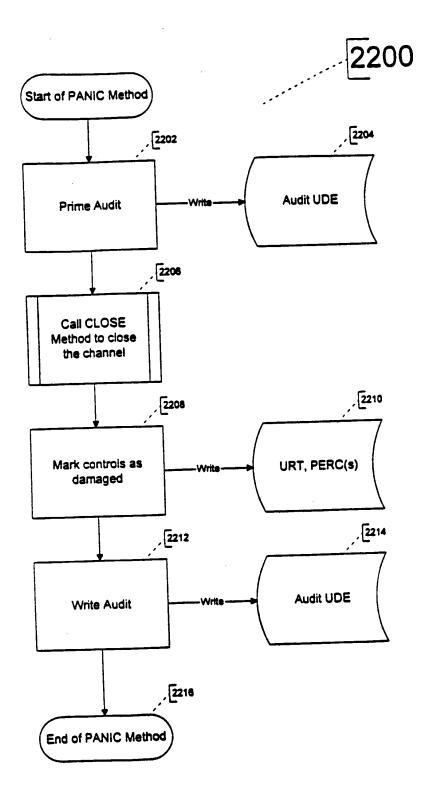


FIG. 58C

)



DESTROY Method Process Flow



PANIC Method Process Flow

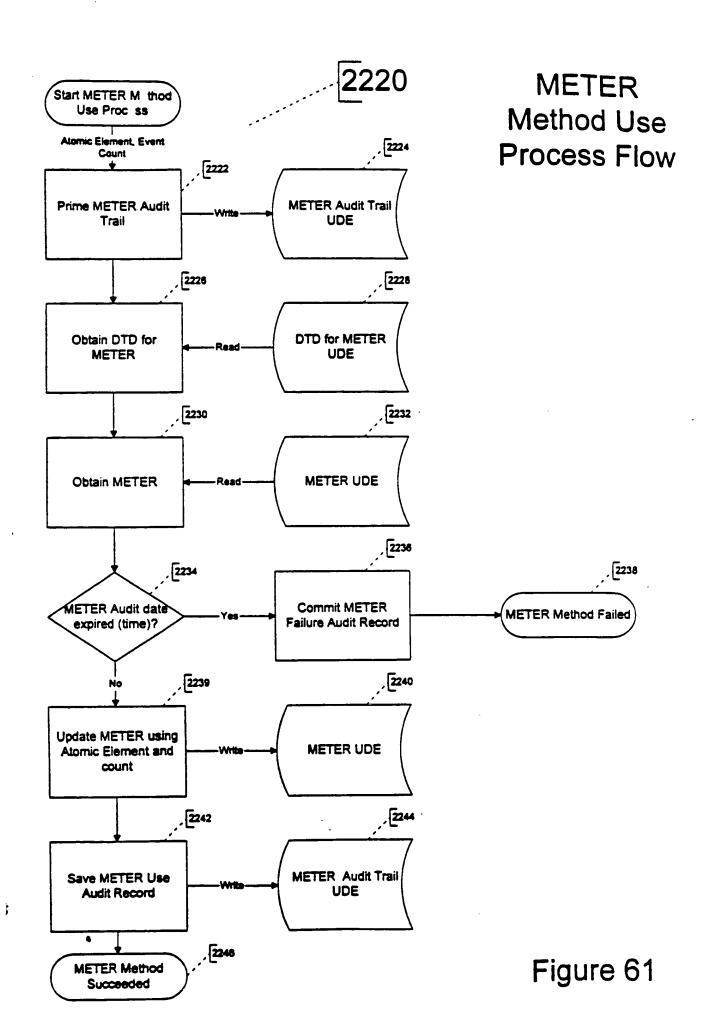
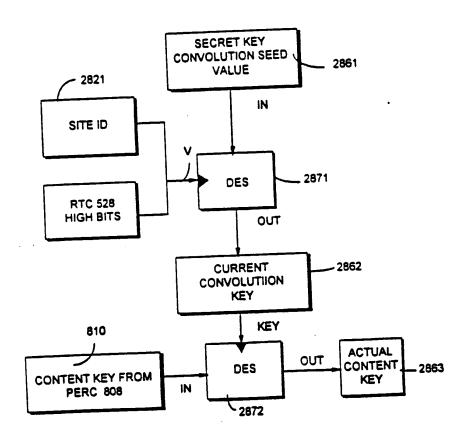
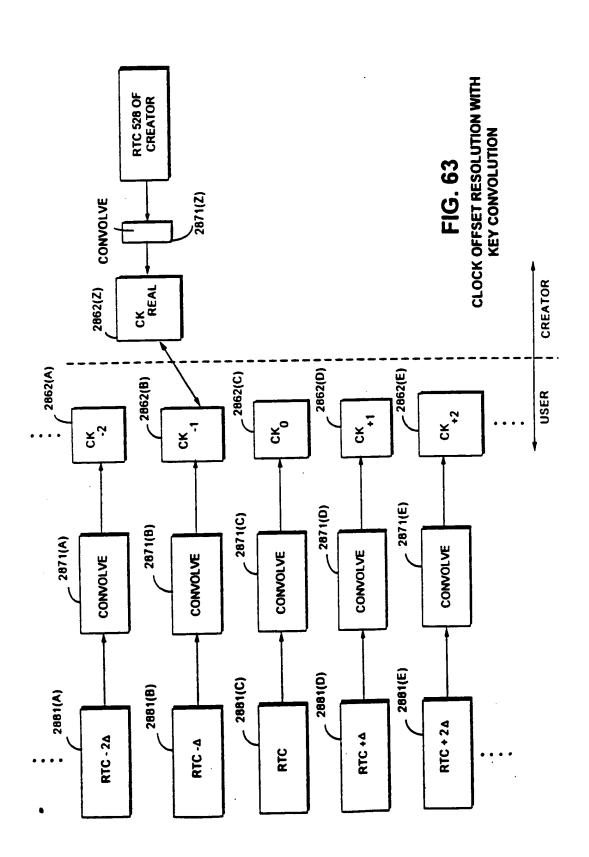


FIG. 62
KEY CONVOLUTION PROCESS





T,

FIG. 64 SPU KEY INITIALIZATION/INSTALLATION

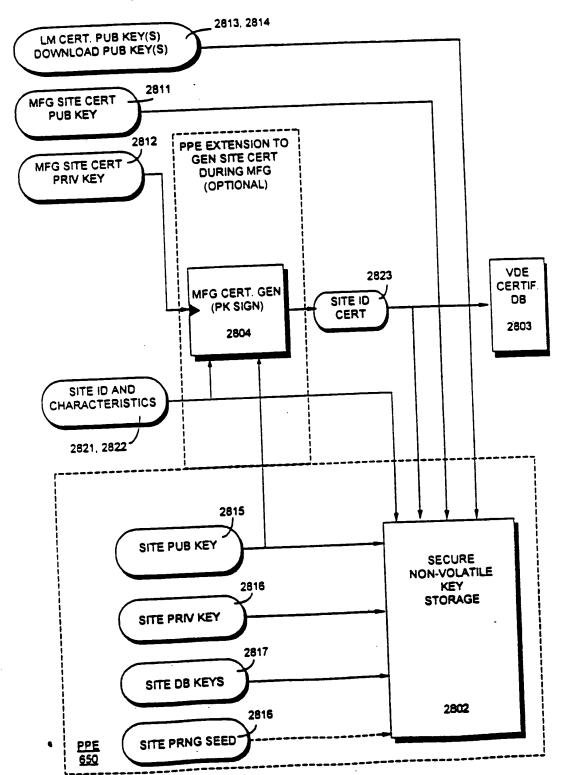
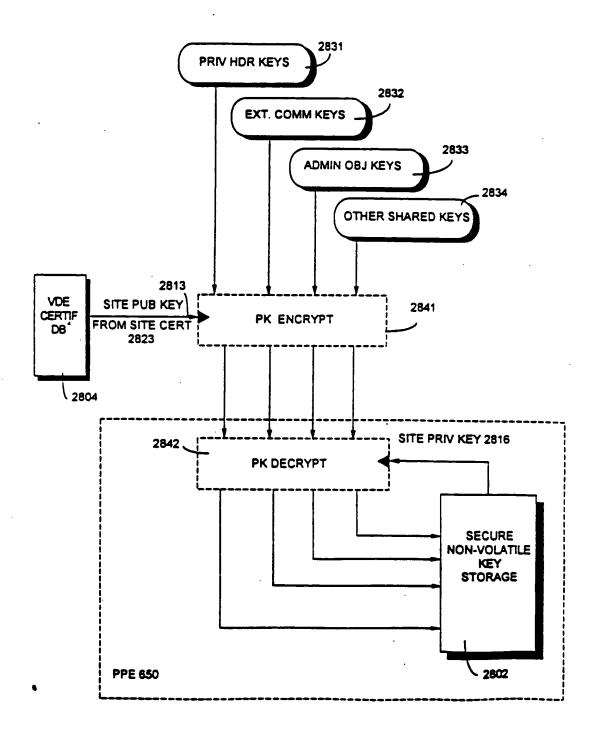


FIG. 65 KEY INSTALLATION & UPDATE



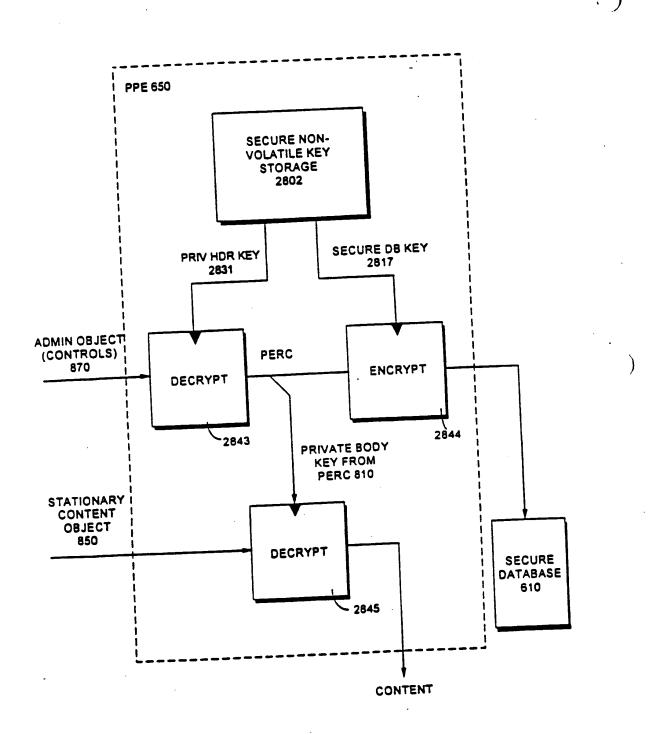


FIG. 66 STATIONARY OBJECT DECRYPTION

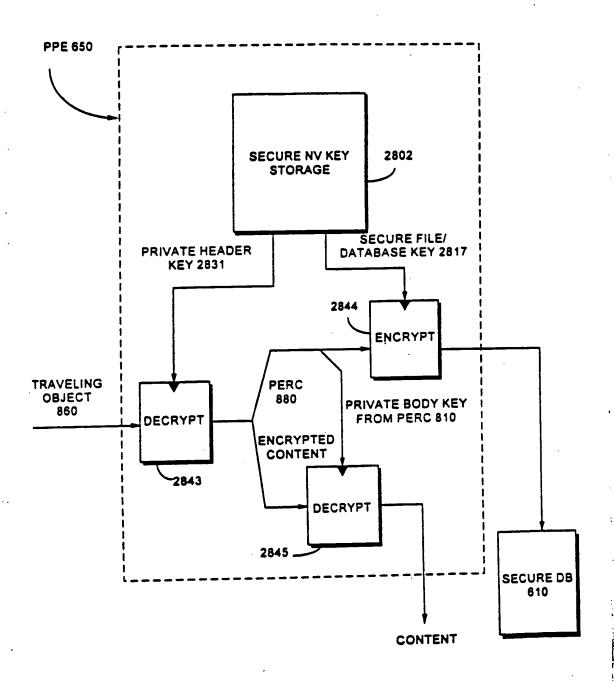
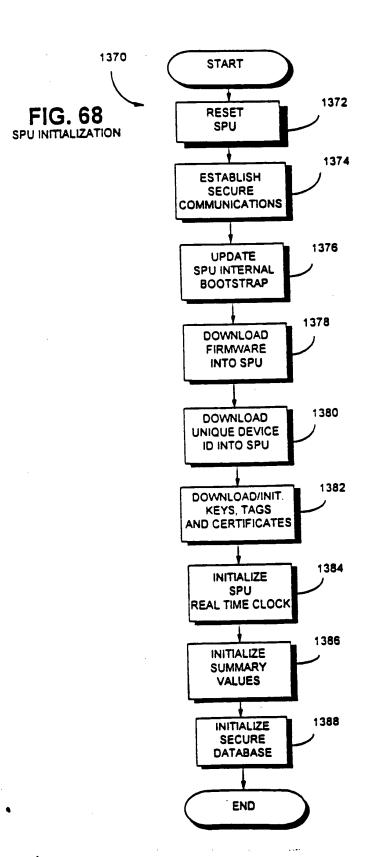
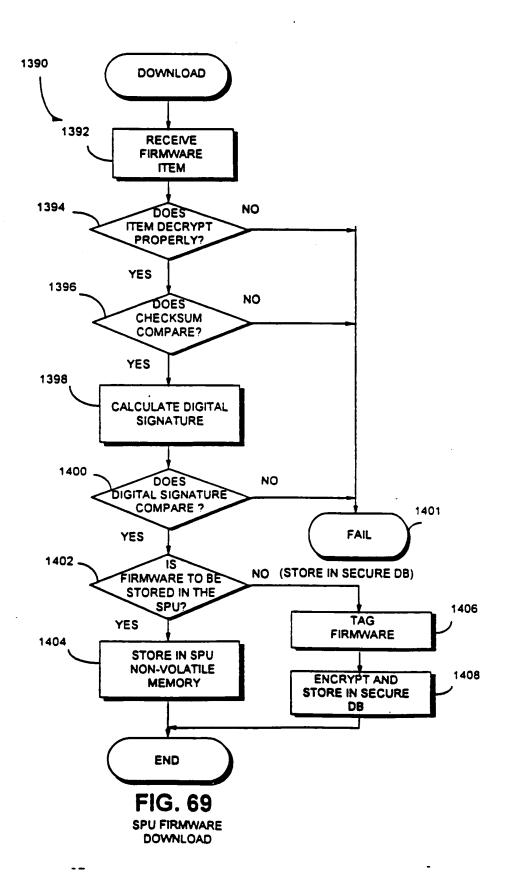


FIG. 67 TRAVELING OBJECT DECRYPTION



)



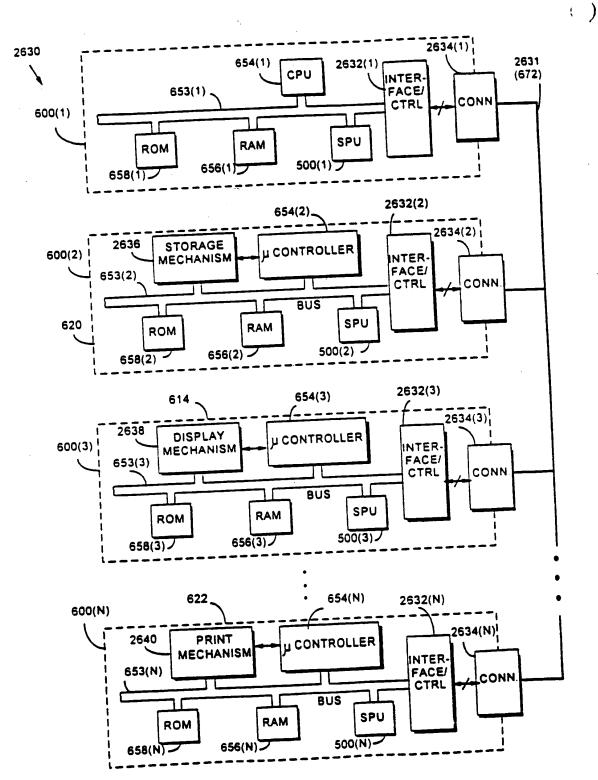
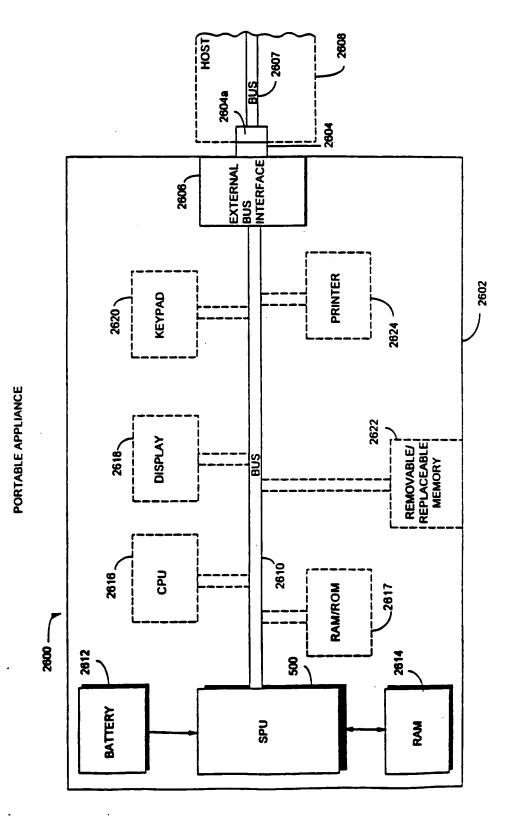


FIG. 70

FIG. 71



LOG IN USER INTERFACE	183	· · · · · · · · · · · · · · · · · · ·
USER NAME: SHEAR, V.		LOGIN
PASSWORD: * * * *		CANCEL
LOGIN AT STARTUP		HELP

FIG. 72A

FIG. 72B

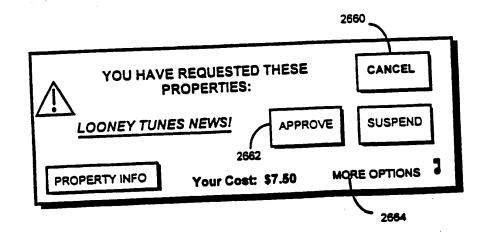


FIG. 72C

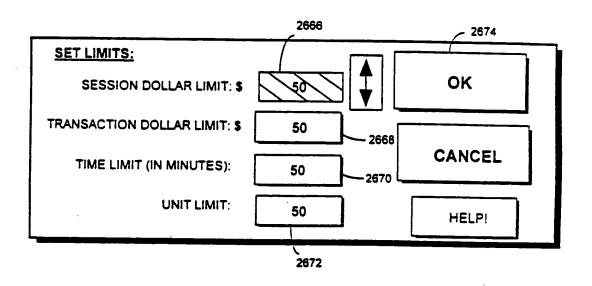


FIG. 72D

PROPERTY INFO CHUCK JONES BIOGRA 256KB WARNER NE BUGS BUNNY. JPEG 1MB WARNER NE BUGS BUNNY. JPEG 256KB WARNER NE BUGS BUNNY. JPEG 256KB WARNER NE BUGS BUNNY. JPEG 256KB WARNER NE BUGK RABBITI DU 64MB WARNER NEL BLANC BIOGRAPH 256KB WARNER NEL BLOOMEY TUNES DATAB 600MB WARNER NEL BUONEY TUNES DATAB 600MB WARNER NEL BUDDING

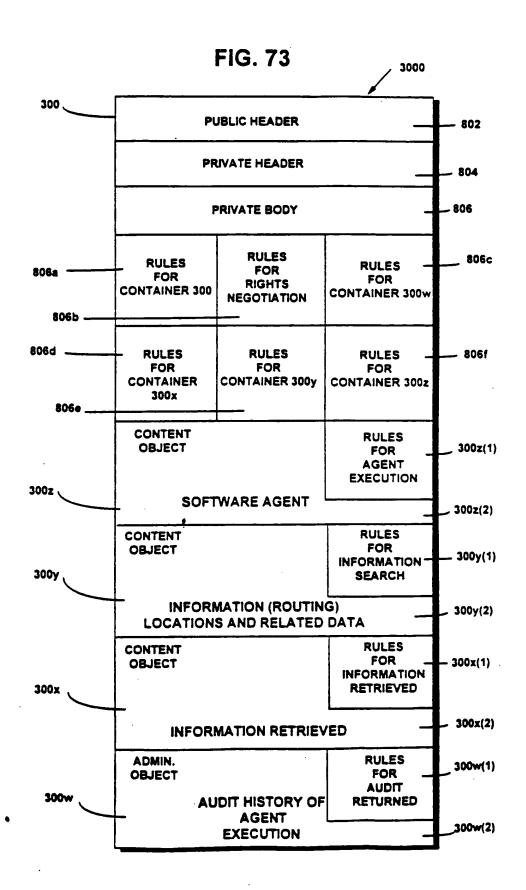


FIG. 74

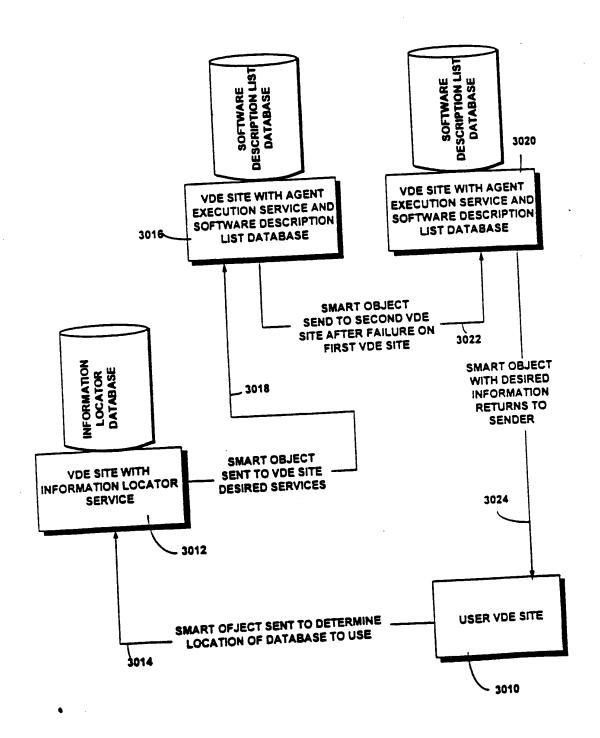


FIG. 75A

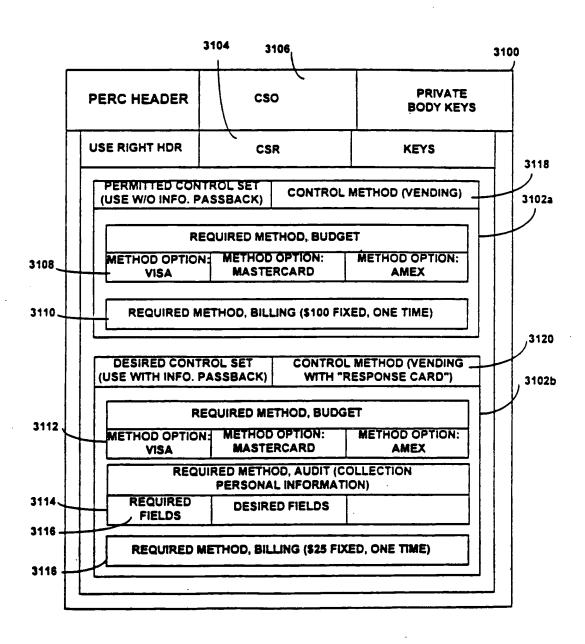
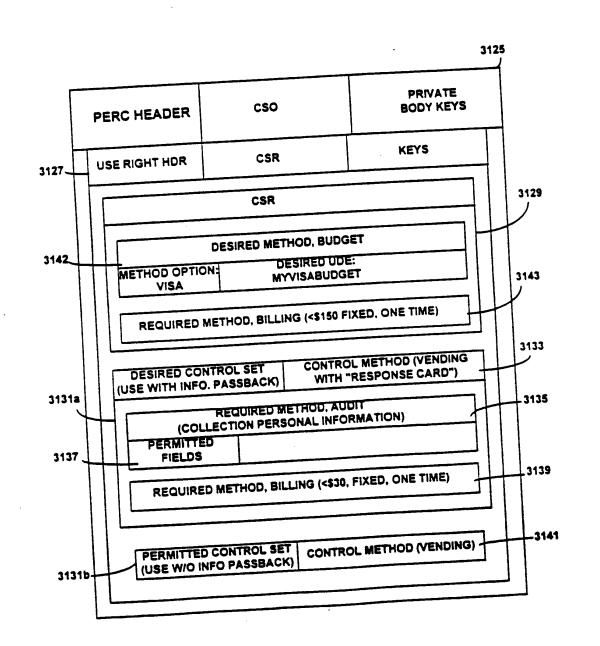


FIG. 75B



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FIG. 75C

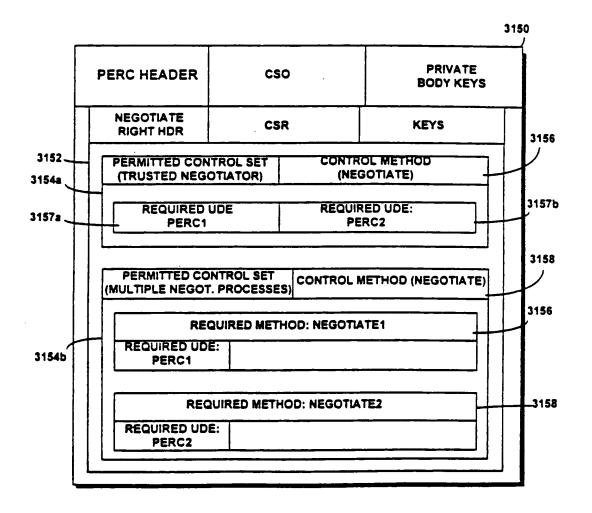
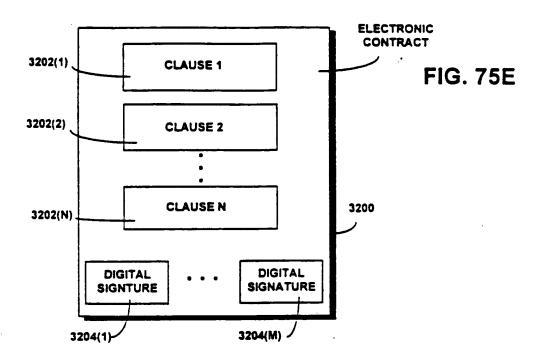


FIG. 75D

	UF	RT HEADER	cso	DIGITAL SIGNATURE	316
		USE RIGHT HDR	CSR		
		ONTROL SET(USE V INFO. PASSBACK		METHOD(VENDING SPONSE CARD")	
3162	REQUIRED METHOD, BUDGET				
3164		METHOD OPTION:	DESIRED UDE: MYVISABUDGET		
3166			METHOD, AUDIT (COL SONAL INFORMATIOI	LECTION	
		PERMITTED FIELDS			
317	•	REQUIRED ME	THOD, BILLING(\$25, F	IXED, ONE TIME)	



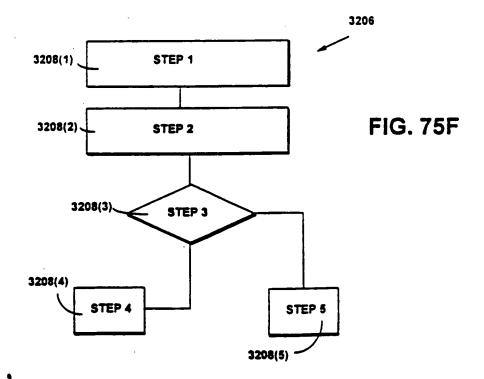


FIG. 76A

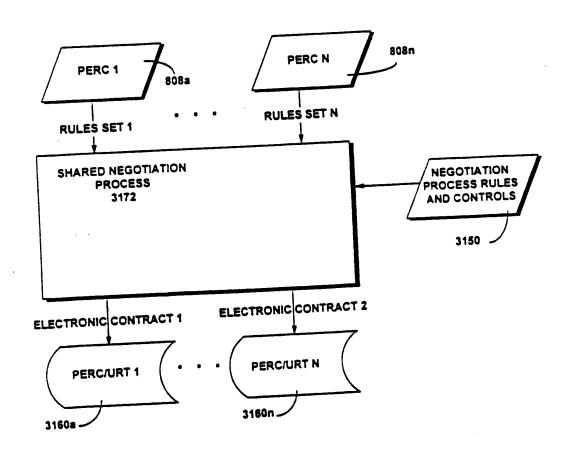
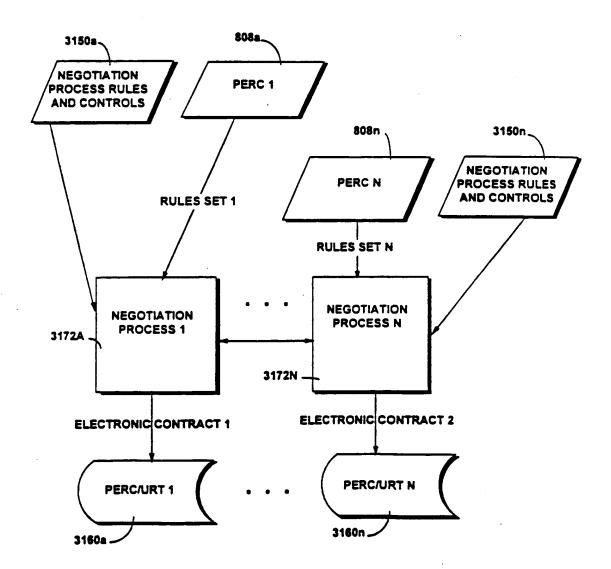
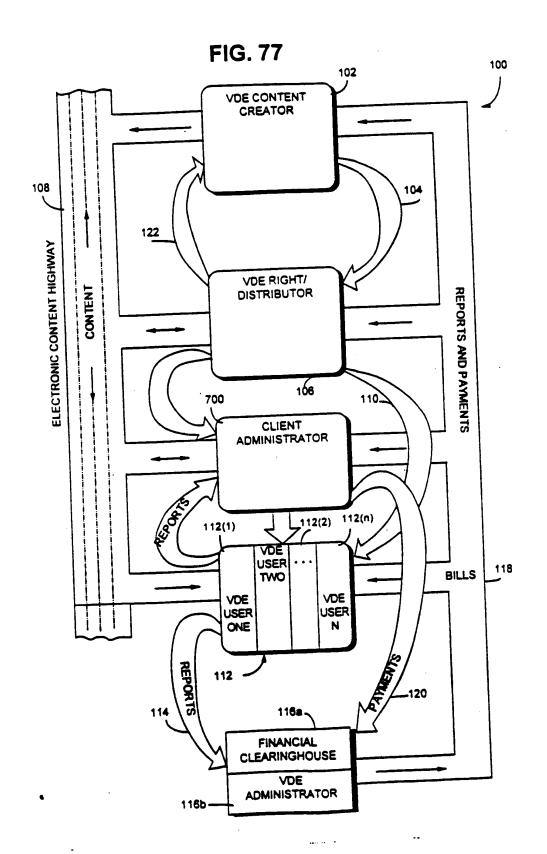
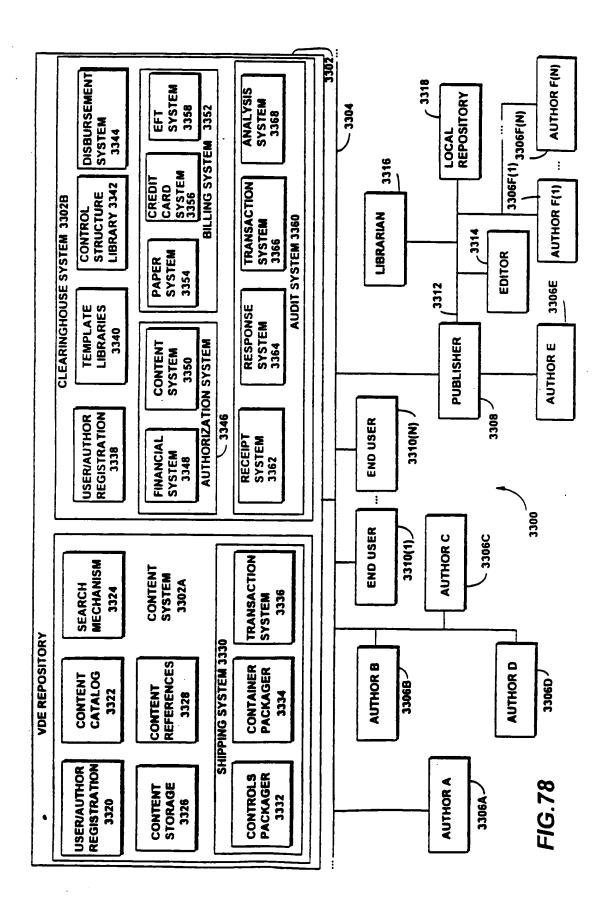


FIG. 76B







()

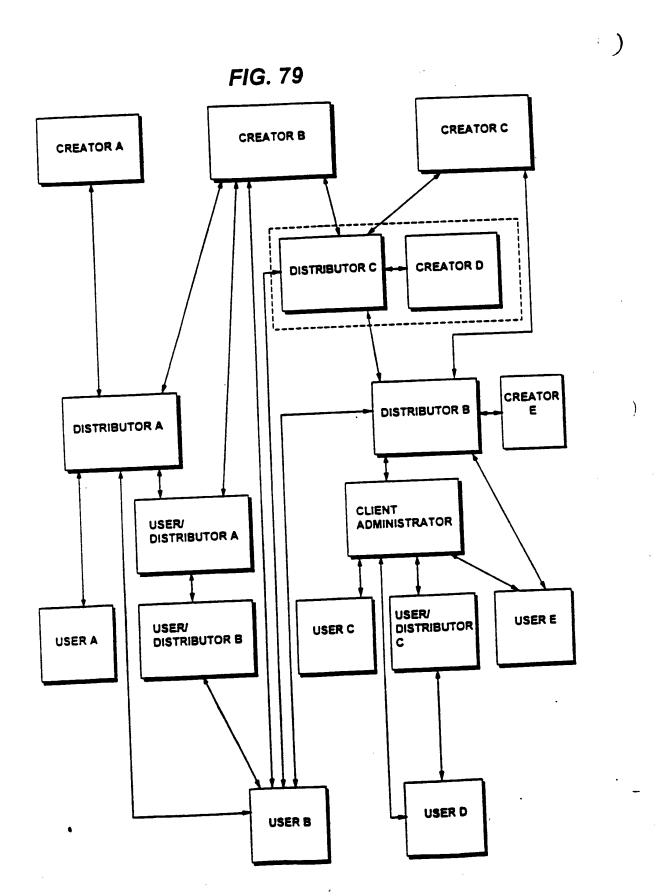
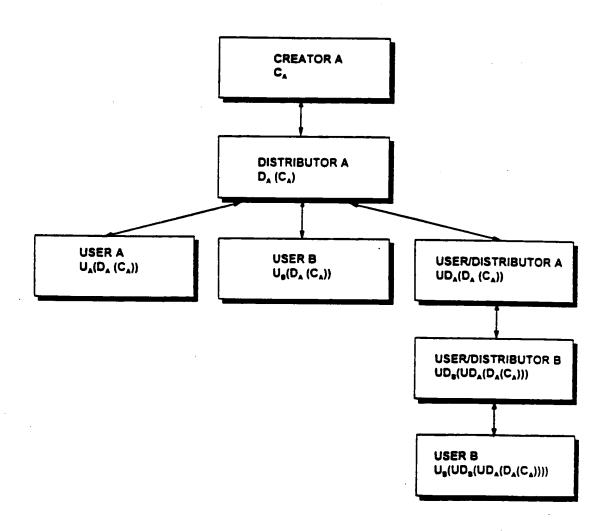
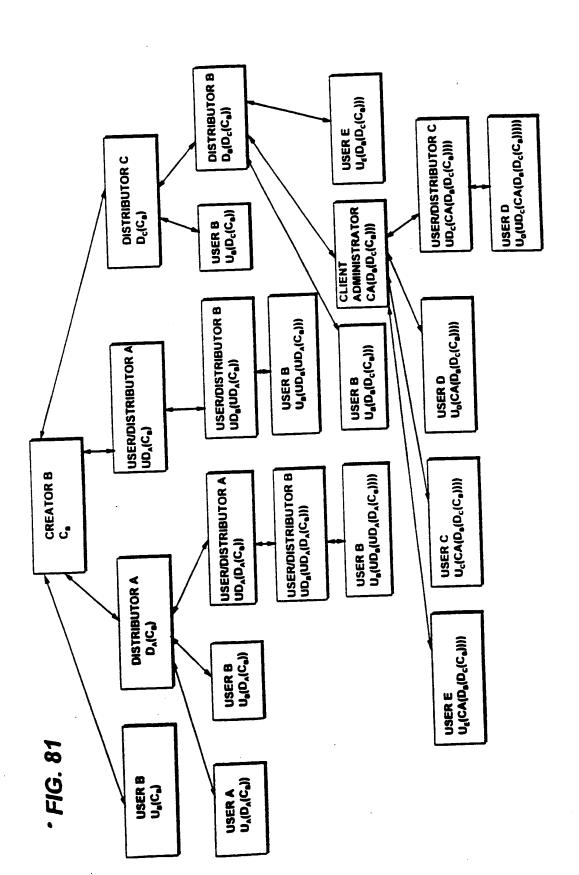
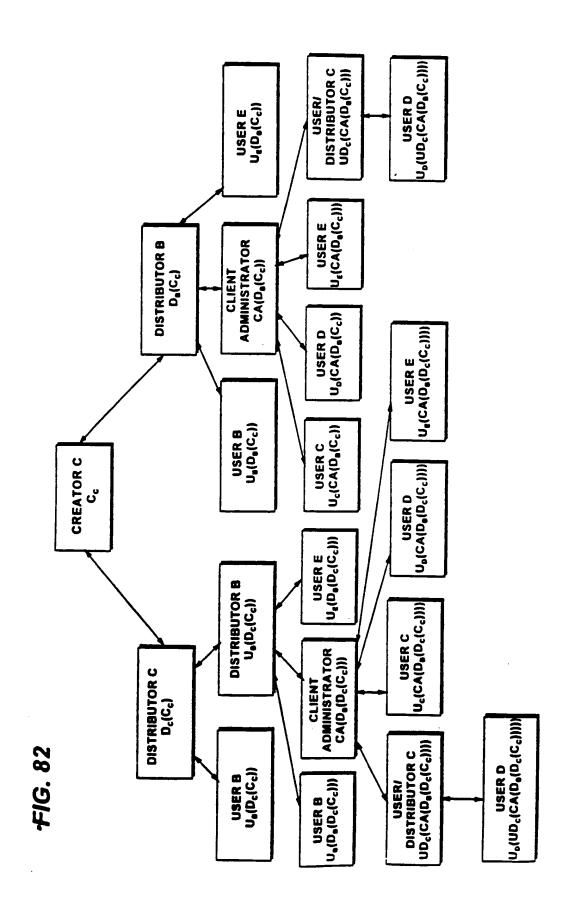


FIG. 80

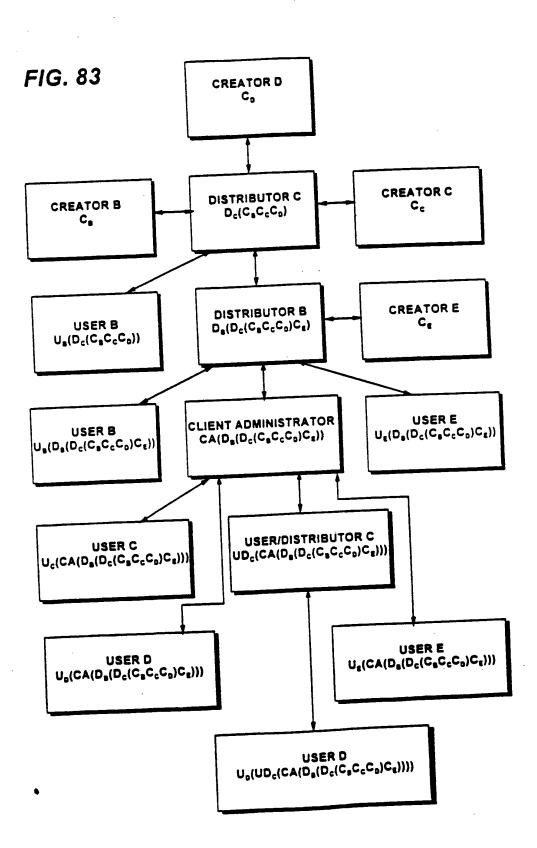




.)

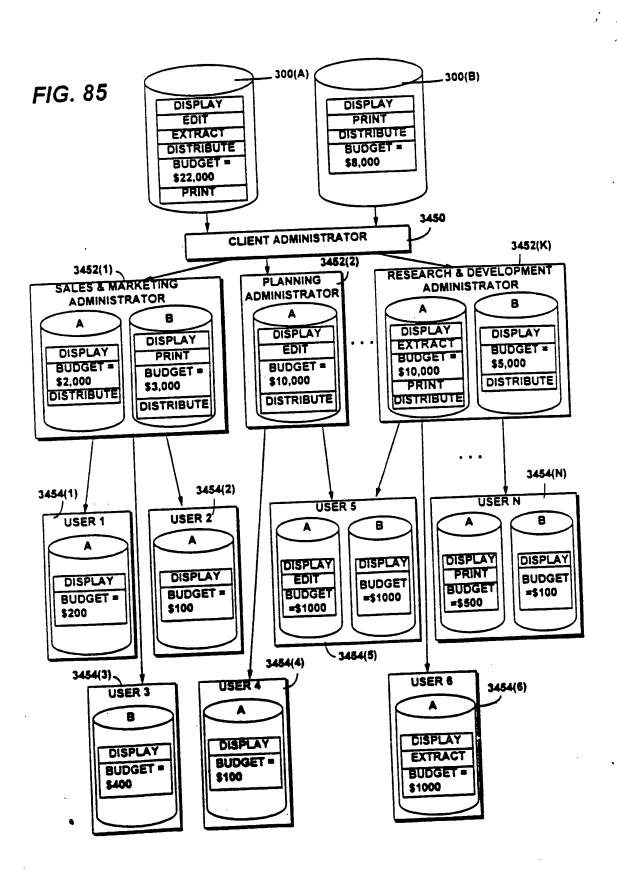


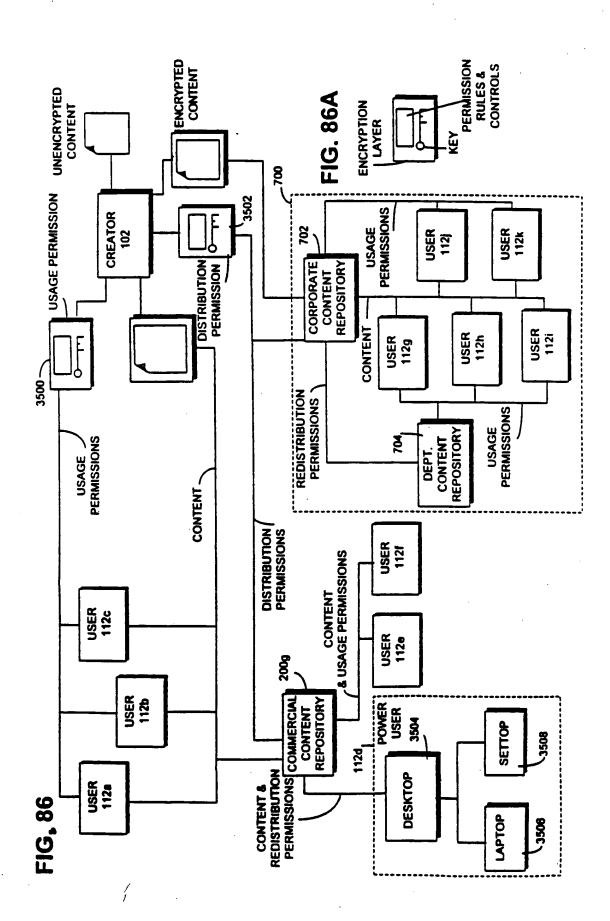
}

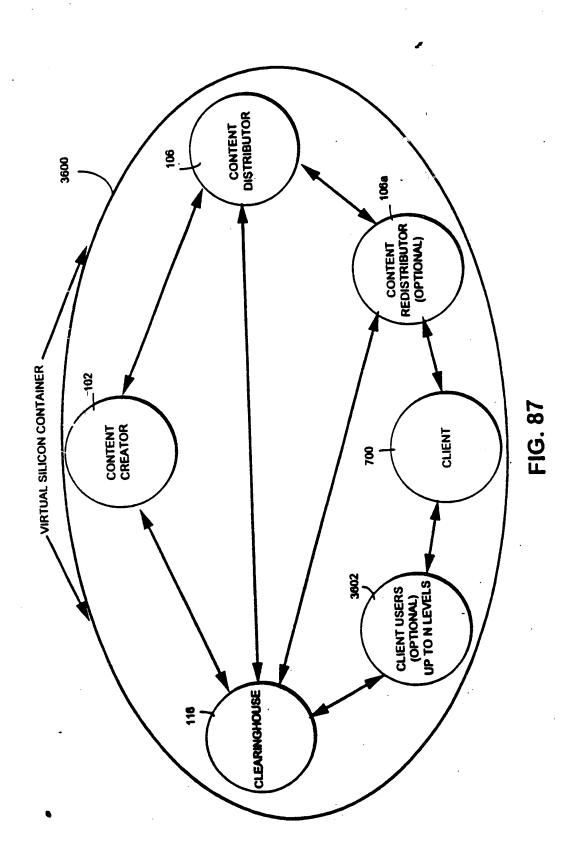


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